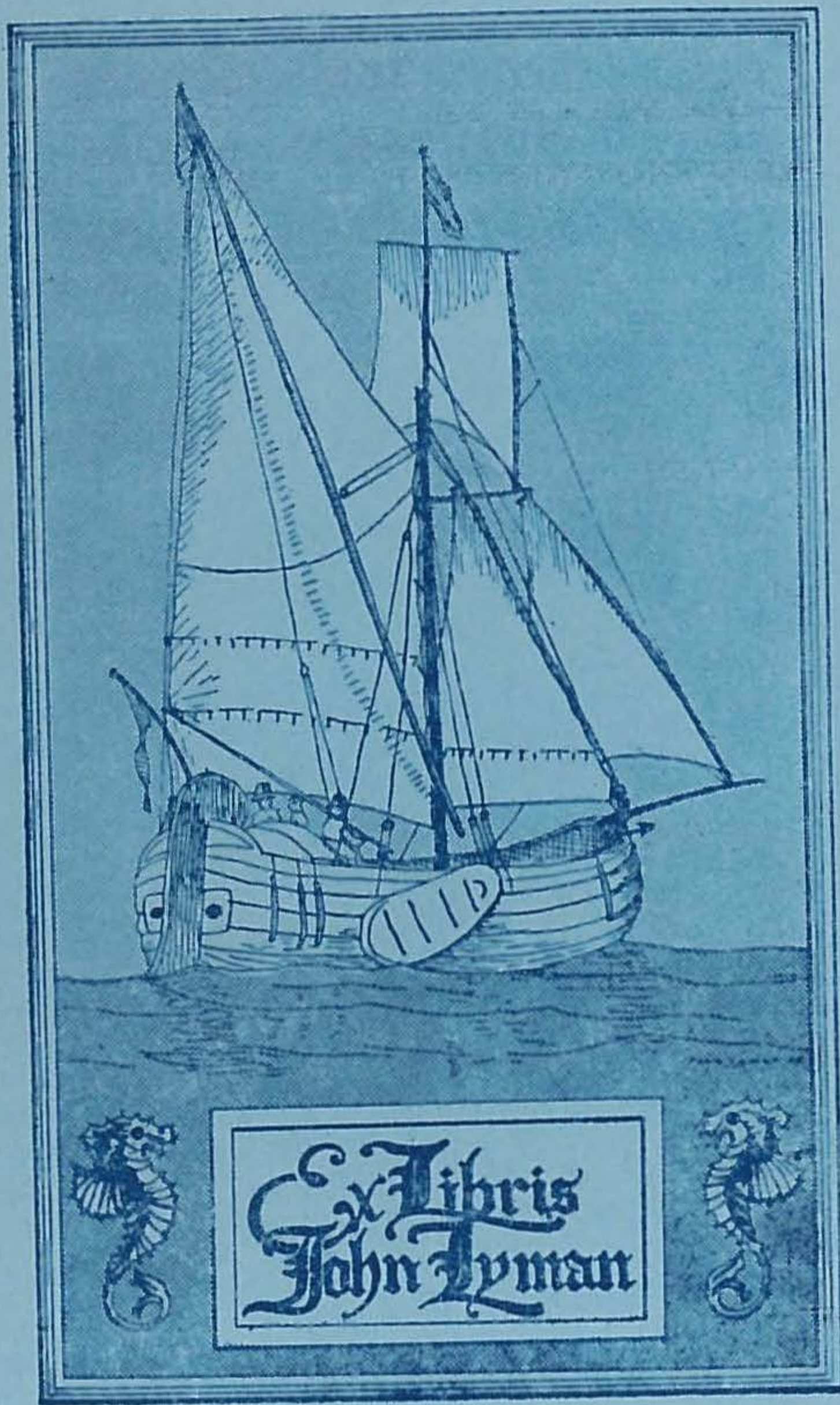


THE  
SEAMAN'S MEDICAL  
GUIDE.







cds 1-21-24

50

Oakland  
11/61

52

*Mrs. J. M. Wilkins' Library.*

No 20

1856

F.E.J.



4319



r  
RC  
986  
54  
1855



*Capt. E. M. Fitch*  
1856

THE

# SEAMAN'S MEDICAL GUIDE,

In preserving the Health of a Ship's Crew;

CONTAINING

PLAIN DIRECTIONS FOR THE USE OF THE MEDICINES  
IN THE CURE OF DISEASES, &c.

WITH FULL INSTRUCTIONS FOR THE

TREATMENT OF FRACTURES & DISLOCATIONS,

ILLUSTRATED BY NUMEROUS ENGRAVINGS.

Comprising also the Admiralty Scale of Medicines,

*Under the Act 7 & 8 Vict., cap. 112.*

---

EIGHTH EDITION.

---

LIVERPOOL:

GEORGE PHILIP AND SON.

LONDON: WILLIAM ALLAN, ALDINE CHAMBERS, PATERNOSTER ROW,

C. WILSON, LEADENHALL STREET; J. IMRAY AND SON, MINORIES.

1855.







## P R E F A C E.

---

THIS WORK was put forward to the attention of those interested in the proper treatment of the question, long before the subject which it treats upon was honoured with the attention of the Government authorities. In its original form, an earnest and somewhat successful endeavour was made to supply such information as could render the Medicine Chest more extensively useful. While adopting the (imperative) suggestions of the Board of Trade, *which are incorporated into the present edition*, it will be observed that the plan of the Work is still wisely adhered to—all subsequent and future alterations emanating from the Honourable Boards of Admiralty and Trade, only resulting in bringing up the standard nearer and nearer to the one exhibited by *this*, the true SEAMAN'S MEDICAL GUIDE.

By careful attention to its contents, to the symptoms and treatment of Diseases and Accidents laid down throughout the Work, illness may, in most cases, be alleviated or altogether removed, when it occurs at sea. The Work is obviously designed to be of service where professional aid cannot be obtained. When in port, where medical assistance can be had, it would be the greatest folly to forego so great an advantage in the treatment of serious cases.

It will, it is hoped, be found that complete success has been attained on the one hand, in avoiding an extension of the book to an inconvenient size; or on the other, omitting any observations necessary to render it a *complete Guide*; preserving moreover, the character of professional intelligence,



and deep acquaintance with its subject—the *prevention* and *cure* of Disease, without using any expressions not likely to be understood by its readers.

The duties which imperatively demand the attention of Captains of vessels, entrusted as they are with serious responsibilities, and often placed in very difficult circumstances, are neither few nor trifling. Among these duties, not the least important are those which arise from their being frequently the guardians of the *health* (or even the *life*) of all on board. By making himself acquainted with the information contained in the following pages, so as to be able to apply his knowledge *promptly*, in the hour of need, a humane commander may entitle himself to the warm gratitude of his crew. It is something to be able to say, "I helped to save that man's life."

Some of the Medicines mentioned in this Work are not *yet* included in the orders which issue from the Admiralty and Board of Trade. They have, however, been found to be highly useful additions to the Medicine Chest, and long experience at this SEAPORT has shewn them to be almost absolutely indispensable to the efficiency of the Medicine Chest *when afloat*.

The Work is now therefore laid before its immediate patrons, in the implicit belief that it will be found more than ever deserving of their favour, and fully realising all that its original editors considered to be implied by the title which it bore, as a "*Seaman's Medical Guide*" of superior character.

J. C. H.

April 1851.



## DOSES OF MEDICINE

ADAPTED TO THE DIFFERENT PERIODS OF LIFE.

The prescribed doses of *each* Medicine are calculated for a grown-up person, throughout this work.

Suppose one drachm of the medicine to be a sufficient dose for an adult (that is, for a person of 21 to 60 years of age), then the other ages will require as below:—

Under 20 years	will require only	$\frac{2}{3}$	or	2 scruples.
„ 14	„ . . . . .	$\frac{1}{2}$	„	$\frac{1}{2}$ a drachm.
„ 7	„ . . . . .	$\frac{1}{3}$	„	1 scruple.
„ 4	„ . . . . .	$\frac{1}{4}$	„	15 grains.
„ 3	„ . . . . .	„	10	„
„ 2	„ . . . . .	„	8	„
„ 1	„ . . . . .	„	5	„
„ 3 months	. . . . .	„	4	„

Above 65 years, the dose diminishes in a similar way. Women, also, would generally require rather smaller doses than those directed to be administered to men.

---

Explanation of Weights and Measures.

The *Grains* are distinctly marked on the Weights every one of the small *round* impressions (exclusive of the *Stamp Mark*) on the thin weights, stands for a Grain.

## WEIGHTS.

- ℥ij is Two Drachms, or a Quarter of an Ounce.  
 ℥i One Drachm, or 60 Grains.  
 ℥fs Half a Drachm, or 30 ditto.  
 ℥ij Two Scruples, or 40 ditto.  
 ℥i One Scruple, or 20 ditto.  
 ℥fs Half a Scruple, or 10 ditto.

The GRADUATED WINE-GLASS is for measuring tea and table-spoonfuls, each teaspoonful being equal to a fluid drachm, or 60 drops; and each tablespoonful to half a fluid ounce.

The DROP-MEASURE is marked from 5 to 60 drops.

It is always better to *measure* and *weigh* the medicines with accuracy.



# MEDICINES AND MEDICAL STORES CONTAINED IN THE CHEST.

The description and use of each Medicine, &c., will be found on referring to its  
NUMBER, and to the PAGE of the Work.

No.	Vessels carrying not more than	Fifteen Men.	Forty.	Above Forty.	Page
1	Peruvian Bark . . . . .	...	...	...	27
2	Jalap Powder . . . . .	...	1 oz.	2 oz.	27
3	Calomel . . . . .	$\frac{1}{2}$ oz.	1 oz.	2 oz.	27
4	Rhubarb Powder . . . . .	...	1 oz.	2 oz.	28
5	Cream of Tartar . . . . .	6 oz.	8 oz.	16 oz.	28
6	Sulphur . . . . .	8 oz.	12 oz.	16 oz.	29
7	Antibilious Pills . . . . .	4 doz.	6 doz.	8 doz.	29
	(1 gr. Calomel, Ext. Coloc. Co. 4 grs.)				
8	* <i>Mercurial or Blue Pills</i> . . . . .	4 doz.	...	...	29
9	Epsom Salts . . . . .	4 lb.	8 lb.	12 lb.	30
10	* <i>Nitre</i> . . . . .	1 lb.	...	...	30
11	Dover's Powder . . . . .	1 oz.	2 oz.	3 oz.	30
12	Astringent Powder . . . . .	2 oz.	3 oz.	4 oz.	30
	(Compound Chalk Powder.)				
13	* <i>Injection Powders</i> . . . . .	2 doz.	...	...	31
	(Acetate Zinc, 30 grs. each.)				
14	* <i>Sweating Powders</i> . . . . .	2 doz.	...	...	31
15	Spirit of Turpentine . . . . .	8 oz.	12 oz.	16 oz.	31
16	Spirit of Lavender . . . . .	...	...	...	32
17	Spirit of Hartshorn . . . . .	4 oz.	8 oz.	12 oz.	32
	(Liquid Ammonia.)				
18	Essence of Peppermint . . . . .	1 oz.	2 oz.	3 oz.	32
	(each oz. to contain 1 drm. of the Oil.)				
19	* <i>Tincture of Rhubarb</i> . . . . .	8 oz.	...	...	32
20	Elixir of Vitriol . . . . .	...	...	...	32
21	Sweet Spirit of Nitre . . . . .	...	...	...	33
22	Laudanum . . . . .	2 oz.	4 oz.	6 oz.	33
23	* <i>Paregoric Elixir</i> . . . . .	4 oz.	...	...	33
24	Castor Oil . . . . .	1 lb.	2 lb.	3 lb.	33
25	Calcined Magnesia . . . . .	4 oz.	6 oz.	12 oz.	34
26	Olive Oil . . . . .	8 oz.	12 oz.	16 oz.	34
27	Friar's Balsam . . . . .	...	...	...	34
28	Balsam of Copaiba . . . . .	6 oz.	12 oz.	16 oz.	34
29	* <i>Opodeldoc</i> . . . . .	8 oz.	...	...	35
30	Red Precipitate . . . . .	...	...	...	35
31	Basilicon Ointment . . . . .	4 oz.	8 oz.	12 oz.	35
32	Turner's Cerate . . . . .	...	...	...	35
33	Mercurial Ointment . . . . .	4 oz.	8 oz.	12 oz.	35

\* The Medicines in *Italic*, and marked \*, are ordered by the Admiralty.



few drops of Laudanum (No. 22), and fomentations of the part with warm water; oppression at the chest and difficulty of breathing, by Blisters; contractions of the hams and calves of the legs, are to be relieved by fomenting the parts with warm vinegar and water, and by the application of poultices and friction; spenginess of the gums, by washing the mouth frequently with gargles; see Alum (No. 54) and Nitre (No. 10). Spruce beer, wine, and spirits in moderation, porter, beer, and cider, also VEGETABLES, particularly salads, cabbages, and potatoes, are all proper in this disease: and a total abstinence from all salt provisions.

The only certain cure, indeed, is a vegetable diet, and living on shore, with moderate exercise, and a little opening medicine occasionally. Among the most certain remedies, likewise, are fresh oranges, lemons, limes, and apples, when to be had; but perhaps no article is more valuable in long voyages, both for the prevention and cure of Scurvy, than POTATOES, which have the advantage of being cheap, easily obtained, and keeping well. The potatoes should be scraped, mixed with a little vinegar or lemon juice, and eaten freely, *raw*, from one to three pounds daily. Raw potatoes, scraped, will also be found an excellent remedy, when used as a poultice, for cleansing scorbutic ulcers.

---

## FEVERS

### ARISING FROM COLD, OR OBSTRUCTED PERSPIRATION, &c.

For the treatment of these, see Fever Powders (No. 14), or Dover's Powder (No. 11).

---

## INTERMITTENT FEVER, OR AGUE.

This is one of the most common diseases that seamen are liable to, owing to the constant exposure to climate. It is prevalent along the whole of the North and South American Continents, the Coast of Africa, the East and West Indies; indeed, there are few ports which seamen frequent that it does not visit more or less. Poor diet, great fatigue, long



watching, exposure to the wet and cold, low spirits, and weakness from disease, all tend to increase the liability to the infection; but the neighbourhood of marshes and stagnant water is the chief cause of Agues, which, like almost all diseases to which sailors are subject (except Scurvy), are more likely to arise in harbour than out at sea. A night land-breeze, in a hot climate, coming over a marshy coast, is neither more nor less than a **MALIGNANT FEVER AND AGUE**, looming large.

Whether the effluvia from the morasses or marshes of an unhealthy anchorage station shall act as causes of disease on board ship, depends, however, very much on the means of *prevention* acted on by the master of the vessel, and *by the crew themselves*. Means may be, and occasionally are, adopted, which result in a remarkable exemption from disease, where escape seemed impossible.

On board a merchant ship it will be allowed that the prevention of disease is of almost as much importance as its cure; and it may be added that, if proper precautions are taken in manning, victualling, and *regulating* the ship and the crew, the diseases which are considered as peculiar to a seafaring life would be in a great degree unknown. Several suggestions for preventing infection from spreading its influence will be found in the introductory observations.

It is of the utmost importance that sailors who are obliged to *wood* and *water*, or perform other duties, on shore, in situations likely to produce Fever and Ague, should exercise caution in food and clothing. As a preventive, it is advisable for persons in such situations to drink freely of Bitters (Nos. 43, 44), two or three glasses a day; or to take a wine-glassful daily of the Quinine Mixture (see No. 45, page 38).

The disease known as the Intermittent Fever, or Ague, comes on at intervals, between each of which there is a perfect intermission of one, two, or three days. When the attack takes place every three days, it is called a *tertian ague*; when it returns on the fourth day, it is termed a *quartan ague*. The attacks are distinguished by the following symptoms:—

The first, or the *cold* stage of an ague, commences with great chilliness, rigours and shivering of the body, sickness and vomiting; the loins, back, and head aching greatly; after a time the warmth of the body returns, and gradually increases to a burning heat, with hurried breathing, great thirst, sleep-



lessness, headache, and sometimes delirium, or raving. This is succeeded by a profuse sweating and sleep, from which the patient gradually awakes apparently well, complaining only of weakness. But at stated intervals, within three or four days (generally every other day), the attack regularly returns, in the same order.

The first step in the cure is to cleanse the stomach and bowels. This, of itself, sometimes arrests the disease, and always renders the operation of the other remedies more safe and certain. When a fit of Ague is apprehended, therefore, give a dose of Calomel (No. 3), keeping the patient warm, and following it up with an Emetic (No. 58, or No. 64).

By administering an emetic immediately *before* the coming on of the cold fit, allowing plenty of warm drink, and keeping the patient warm in bed, to assist perspiration while the emetic is acting, the return of the ague may sometimes be prevented. The patient should drink freely of warm water or weak Chamomile tea.

To put a stop to the further progress of the fit, in a cold stage, when it has taken place, recourse must be had to *hot drinks*, such as barley-water, thin gruel, &c., covering the sufferer with warm clothing, and putting bottles of hot water to the feet. From thirty to forty drops of Laudanum (No. 22), at the commencement of the disease, is often efficacious; *if requisite*, from fifteen to thirty drops more may be given, a quarter of an hour after.

The *Cold* stage of Ague has been known to prove fatal; this danger may be suspected should its continuance be long, the breathing difficult, and the pulse begin to fail. Cover the patient well, introducing hot bricks, or bags of warm salt, under the bed-clothes, placing them near the stomach, the heart, and the legs; a teaspoonful of *Æther* (No. 40) and a little cayenne pepper, may be given in a glass of wine. Hot brandy-and-water may be given freely, if necessary. As it would not be safe to give an Emetic, an attempt may be made to excite vomiting, by filling the stomach with warm water or thin gruel, and then putting a feather, or the finger, down the throat. Give one of the Sudorific Powders (No. 14) every four hours. When the pulse rises, and the skin becomes warm, the danger may be considered as over for the present.

The *Hot* stage may also be fatal; should the patient become quite delirious, the countenance flushed, the eyes red, accompanied by a constant watching and restlessness, this result



may be apprehended. In this case, the treatment must be varied; if the patient is young and vigorous, blood may be taken from the arm, at the commencement of strong feverish symptoms; bathe the head with cold vinegar and spirit, after cutting off most of the hair; plenty of fresh air is to be freely admitted into the berth, with a very slight covering of bed-clothes; nothing but cold water allowed as drink.

When an intermission of the attack is obtained, Peruvian Bark (No. 1) is to be given as directed, during the interval. Bark and Quinine are the grand remedies. The Sulphate of Quinine (No. 45) has often been found to succeed where Bark has failed; it is given with Elixir of Vitriol in a wine-glassful of water, as directed at page 26. In case of a regular attack of Intermittent Fever, in a cool climate, it is advisable to wait for a perfect intermission, before giving the Bark or Quinine, and give the medicine as soon as the hot fit is over. But, in the hot climates, where Intermittents are apt to degenerate into *Remittents* (see next article) or continued fever, it would be right to employ them very soon after the attack.

The medicine should be continued for some time after the disappearance of the complaint, in order to prevent a *relapse*; particularly in damp weather, or during the prevalence of an easterly wind. The bad effects on the bowels which sometimes arise may be obviated by addition of other medicines; thus, diarrhoea, or looseness, will be prevented by adding from four to eight drops of Laudanum; and costiveness, if it occurs, by Rhubarb, or other mild purgative.

Medicine, however, will fail to cure the disease, unless particular attention be paid to the diet, which should consist only of gruel, sago, arrow-root, cocoa, stale bread, &c.; no wine, ale, acids, or spices, can be taken without aggravating the complaint. When the fever is fairly on the decline, the treatment, as to diet and medicine, must be changed. Meat, with ale, porter, or wine, may be given moderately; should no increase of fever follow, they may be more freely used.

---

## REMITTENT FEVER.

When the fever *abates*, but does not *go off entirely*, before another attack begins, it is then called *Remittent*. In warm climates, especially near the tropics, the Remittent is a very



prevalent kind of fever, and attended with more suffering than the other form; the fits, also, come on at irregular times.

It should be treated according to its principal symptoms. Give a mild emetic, such as Ipecacuanha (No. 58); and afterwards the bowels may be emptied by some mild purgative—twenty grains of Rhubarb (No. 4) or Jalap (No. 2), with three or four grains of Calomel (No. 3), will answer the purpose.

In order to bring, if possible, the remissions into perfect intermissions, it will be proper to give the Fever Powder (No. 14) in *small and frequently-repeated doses*. In a few days this treatment will either subdue the fever, or convert it into an Intermittent. In the latter case, the Bark or Quinine should be administered as prescribed in that disease. In hot climates, however, it will be necessary to give the Bark whenever there is a slight remission or abatement of the fever, without waiting for a complete intermission.

The diet of the patient should be of the lightest kind; such as sago, rice, arrow-root, &c.; spirits, wine, ale, acids, and spices, are not allowable. If frequent vomiting occurs, apply a large blister to the stomach.

The general treatment of Continued Fevers is nearly the same as the plan pursued in the Remittents. At the commencement, emetics and gentle purgatives should be given, and proper attention paid to the state of the bowels. If the skin is unnaturally hot, the body should be sponged with cold water and vinegar. When the patient begins to get better, chicken broth or beef tea may be allowed, and afterwards meat; but spirituous or fermented liquors must be carefully avoided for some time, lest an increase of fever be brought on.

---

## YELLOW FEVER, OR BLACK VOMIT.

This dangerous disease is not *contagious* in places where there is good fresh air, cleanliness, and regularity; but becomes so in unwholesome, swampy situations, where much filth is allowed to accumulate. It occurs chiefly in warm climates, more particularly along the coast of Africa, North and South America, and the West India Islands.

The Yellow Fever usually commences with lassitude and weariness, shivering and great inclination to vomit, faintness and giddiness, flushing of the face; the lower part of the



forehead and the eye-balls are painful, the eyes red and brilliant; constant wakefulness, pain in the back, and general debility; pain on pressing the pit of the stomach; urine scanty, high coloured, and turbid; the tongue covered with a dark fur, the skin hot, dry, and hard. There is commonly, at the commencement, much bile on the stomach, which is thrown off by vomiting, either natural, or to be brought about by giving an emetic. In the course of the progress of the disease, however, it is not common for an excess of bile to exist; but, on the contrary, rather a deficiency of it, in violent and dangerous cases, as indicated by the clay-coloured stools. As the disease continues to advance (about the third day), the skin of the face and breast becomes yellow, and the same colour is visible in the eyes; the retching and vomiting becomes incessant, and the bowels very costive, with a burning sensation in the stomach; the patient cannot be raised without fainting. The disease may be fatal in a few hours, though it seldom terminates in death until the fifth or sixth day, and sometimes longer.

In the fatal stages of the disease, the greatest weakness prevails: livid spots are visible on the skin, the tongue dry and black; teeth incrustated with a dark fur; hiccough and offensive breath. The whole body becomes of a yellow hue, the pulse sinks, the extremities and surface of the body become cold; dark and foul stools are discharged; bleeding from the ears, nose, and gums, takes place, accompanied by vomiting of a black matter, resembling coffee grounds, when death follows.

In the treatment of Yellow Fever, a *small quantity* of blood may be taken, at the *commencement*, if the patient should be of a very strong constitution, young, and of a full habit, the pulse hard and throbbing, with violent pains in the head and back, and the disease of a mild character; but *otherwise*, it would prove very dangerous, and must not on any account be attempted after the first twelve or twenty-four hours.

It is proper, in all fevers of warm climates, to commence by cleansing the stomach and bowels. In Yellow Fever, however, when there is copious natural vomiting, taking an emetic may be omitted, the patient drinking freely of Chamomile tea. In case of constant *retching* and *inclination* to vomit, give one scruple of Ipecacuanha (No. 58) at the commencement, repeating it in half an hour, if necessary, the patient being in bed, and drinking plentifully of warm water



during its operation; a profuse perspiration often succeeds, and stops the disease, unless very violent. As the vomiting will interfere with giving opening medicines, a clyster of one ounce of Castor Oil in a pint of thin gruel may be given daily, if required. After the first purging, the bowels must be moved every day; but as the stomach will not bear purgatives for the first three or four days, clysters of salt water must be given to produce the effect. When the vomiting has subsided, an ounce of Castor Oil should be given, and a very low diet observed for a few days, as there is sometimes a remission of the disorder after thirty-six or forty-eight hours from the attack, followed by a return of the symptoms, with redoubled violence. Poultices or Mustard Plasters should be applied over the pit of the stomach as soon as vomiting commences.

From the first hour of the attack, the patient should abstain from solid food, and subsist on sago, gruel, or barley-water, with lemonade, toast and water, orange juice, &c. The greatest cleanliness is absolutely requisite. Should the patient be in a sinking state, a little wine may be allowed; but not unless it appears absolutely necessary.

The external application of cold water, or equal parts of vinegar and water, sometimes checks the disease, when applied freely at the commencement, especially to the head, and other parts of the body where there is unnatural heat and dryness of the skin.

To bring the stomach to bear proper medicine, is a great object in the cure. The only obstacle is the violent and obstinate disposition to vomit, which is the most alarming symptom of the disease; the principal part of the management consisting in the prevention or removal of it. The stomach is, therefore, to be treated with the greatest tenderness, and only such drinks given as are soothing and grateful. Should excessive retching continue to exist, small doses of Seidlitz Powder (No. 48), in about a wine-glassful of water, may be given whilst effervescing, every half hour.

To draw the inflammation from the vital parts, and to relieve vomiting, Blisters (see No. 66, page 45) may also be applied, as directed, to the legs, and down the back, along the whole length of the spine.

When the vomiting is allayed, the bowels should be opened with ten grains of Calomel (No. 5) and twenty grains of Jalap (No. 2), given in syrup, and assisted by a clyster of warm gruel. If this fail to open the bowels, the doze should be re-



peated, or some other purge given, within two or three hours after the first. Calomel possesses great advantages over other medicines in this complaint, being less bulky and less offensive to the taste, and consequently less likely to be thrown up by vomiting.

As soon as the bowels have been moved, and the stomach will admit of it, give the Bark (No. 1), or Quinine (No. 45). But if there is much inflammation, and the disease still gains ground, discontinue the Bark, and give Calomel (No. 3) in large doses: five grains, with six or seven drops of Laudanum (No. 22), in treacle or thick syrup, may be given every three hours, until the gums become affected, and salivation is brought on. It is very desirable in this fever to excite a Mercurial action, so far at least as to induce some spitting, but sometimes this cannot be done by mercurial pills, or other internal medicines, owing to the necessity of appropriating the retentive power of the stomach to the Bark. The object, therefore, must then be attained by rubbing a portion of Mercurial Ointment, of the size of a nutmeg, on the inside of the thighs every eight hours, and dress the blisters, if there be any, with the same.

When blood flows from the nose and gums during the disease, it is a very dangerous symptom. If the bleeding from the gums be excessive, so as to weaken the patient, ten grains of Lunar Caustic (No. 57), dissolved in half a wine-glassful of water, and applied freely, will greatly check it.

When the stomach becomes perfectly quiet, it will afford the patient great relief to procure perspiration and sleep, for which purpose a powder, composed of one grain of Calomel (No. 3), one grain of Camphor (No. 42), and one grain of Opium (No. 60), may be given in the evening. After one or two days a dose of Seidlitz Powder (No. 48), or a small dose of Salts (No. 9), may be taken daily.

The precautions necessary to *prevent* this dreadful disease are as follows:—Should the ship be at anchor where the disease is prevalent, or at a station which is known to be unhealthy, from swamps or otherwise, give a wine-glassful of the Quinine mixture (see No. 45, page 38) to each of the crew daily, as well as a gentle dose of Salts (No. 9) occasionally; the food allowed should be better than usual,—porter, wine, and good animal food, should be freely used. Spirituous liquors should be very sparingly allowed, if not entirely for-



bidden, as they are apt to predispose the system to the disease; and those persons who have accustomed themselves to a free use of them, are much less likely to recover from an attack of the Yellow Fever.

---

### TYPHUS FEVER, OR LOW NERVOUS FEVER.

This fever differs considerably from those of an inflammatory kind. It may be known from Putrid or Malignant Fever, by the milder symptoms, and more gradual attack; and from Inflammatory Fever by the smallness and weakness of the pulse. It commences with anxiety, depression of spirits, and confusion of thoughts, accompanied by giddiness and pain in the head, sickness at the stomach, loss of appetite, dry and loaded tongue; very hot skin, and shivering, alternately; weakness and pain in the back and legs; bowels costive, bad taste in the mouth, pulse full and rapid; as the disease advances, delirium or raving takes place. When the attack is more violent, the patient lies on his back, in a state of unconsciousness, breathing with difficulty, starting during sleep, catching or picking the bedclothes with the fingers, constant muttering, weak pulse; the stools and urine pass involuntarily, the tongue and gums become dry, and of a very dark colour, breath offensive; rattling in the throat is observable, and death follows.

The Typhus Fever is often brought on by grief, fear, or anxiety; weakness of body, and poor living; intemperance, or excess of any kind. It is a very dangerous fever; and, as soon as discovered, the patient should therefore be removed from connexion with his shipmates, making the berth as airy as possible, and, throughout the disease, paying great attention to cleanliness; the fever being of so contagious a nature, that the greatest care is necessary to prevent it from spreading among the rest of the crew.

If the skin is very dry and hot, sponge the body all over with *cold* water and vinegar; then wiped dry and put to bed, covering moderately warm. If this does not produce a softness of the skin in three hours, relieving the pain in the head, causing perspiration and the return of sensibility, it must be repeated for several times, at about two hours' interval, with Dover's Powder (No. 11) at night. Should this be ineffectual, give speedily an Emetic, and, after the stomach is settled,



five or ten grains of Calomel (No. 3); two hours after, give a *wine-glassful* of the following opening medicine:—Take one ounce of Salts (No. 9); Jalap (No. 2), sixty grains; Tartar Emetic (No. 39), half a grain; twenty drops Essence of Peppermint (No. 18): dissolve in half a pint of water. Repeat the dose every three hours, until the bowels are kept *freely* opened. The diet must be kept low for some days; gruel, barley-water, &c. He may also take chicken broth, beef tea, or other *light* animal food, but in such quantities only as his stomach requires, and as will be likely to agree with him.

Should the stools be of a dark colour, and very offensive, the Calomel may be repeated in doses of five grains at night, until they become more natural, with a dose of the above opening medicine on the following morning. Should the Calomel gripe, mix with each dose five grains of Dover's Powder (No. 11). If there is great oppression, or difficulty of breathing, and tenderness at the pit of the stomach, a large blister (see No. 66, page 45), should be formed on the chest, and kept open with Basilicon (No. 31). If there be much delirium, the head should be shaved, or the hair cut *close*, and blisters raised on the back of the head, and down the neck.

The vomiting, which is occasionally very distressing, will sometimes be relieved by one or two tablespoonfuls of brandy. Should he be in a sinking state, and becoming unconscious, give a glass of wine, or about sixty drops of Spirits of Harts-horn (No. 17) in a wine-glassful of water, every hour, and let him have as much porter as he can take; this last is highly beneficial, and may be continued till health is restored.

About the 7th, 14th, or 21st day from the attack, if the disease abates, the patient from that time slowly recovers. Return of health may be expected when the eyes brighten, the tongue becoming moist and clean, the pulse more firm and slower, with recovery from the raving, sound sleep, and abatement of the other unfavourable symptoms. Great care must be taken to allow him only a small portion of food at first, which may be increased daily, if it does not produce a return of the feverishness. When quite recovering, the diet should be nourishing, of any wholesome kind that the patient feels an inclination for, with gentle exercise.



No.	Vessels carrying not more than	Fifteen Men.	Forty.	Above Forty.	Page
34	Simple Ointment . . . . .	8 oz.	16 oz.	24 oz.	35
35	Strengthening Plaster . . . . .	...	...	...	36
36	Adhesive Plaster . . . . .	1 yd.	2 yds.	3 yds.	36
37	* <i>Blue Vitriol</i> . . . . .	4 oz.	...	...	36
38	Goulard's Extract . . . . .	...	...	...	36
39	Tartar Emetic . . . . .	...	...	...	37
40	Æther . . . . .	...	...	...	37
41	Chamomile Flowers . . . . .	...	...	...	37
42	Camphor . . . . .	...	...	...	38
43	Bitter Ingredients . . . . .	...	...	...	38
44	Bitter Tincture . . . . .	...	...	...	38
45	Sulphate of Quinine . . . . .	$\frac{1}{2}$ oz.	1 oz.	2 oz.	38
	(If bound to E. or W. Coast of Africa, Coast of China, or Borneo.)	3 oz.	4 oz.	4 oz.	
46	Bicarbonate of Soda . . . . .	8 oz.	16 oz.	24 oz.	39
47	Tartaric Acid Powder . . . . .	6 oz.	12 oz.	16 oz.	39
48	Seidlitz Powders . . . . .	...	...	...	39
49	Croton Oil . . . . .	...	...	...	39
50	Linseed . . . . .	...	...	...	40
51	Gum Arabic . . . . .	...	...	...	40
52	White Vitriol . . . . .	...	...	...	41
53	Chloride of Lime . . . . .	...	...	...	41
54	Alum . . . . .	1 oz.	2 oz.	3 oz.	41
55	Acid of Lemons . . . . .	4 oz.	6 oz.	8 oz.	41
56	Salt of Tartar . . . . .	...	...	...	42
57	Nitrate of Silver . . . . .	$\frac{1}{4}$ oz.	$\frac{1}{2}$ oz.	1 oz.	42
	(Lunar Caustic.)	...	...	...	42
58	Ipecacuanha . . . . .	...	...	...	42
59	Linseed Meal . . . . .	...	...	...	42
60	Opium Pills . . . . .	2 doz.	3 doz.	3 doz.	43
	(1 gr. opium, 4 grs. Castile Soap each.)	...	...	...	
61	Senna Leaves . . . . .	...	2 oz.	3 oz.	44
62	Mustard, <i>in tin cases</i> . . . . .	1 lb.	2 lb.	3 lb.	44
63	Purgative Powders . . . . .	2 doz.	3 doz.	4 doz.	44
	(each 2 gr Calomel, 1 drm P. Jalap Co.)	...	...	...	
64	Emetic Powders . . . . .	2 doz.	3 doz.	3 doz.	44
65	Powder of Ginger . . . . .	1 oz.	2 oz.	4 oz.	44
66	Blistering Plaster . . . . .	4 oz.	8 oz.	12 oz.	45
67	Lint . . . . .	$\frac{1}{2}$ lb.	1 lb.	1 lb.	45
68	Cotton Wool . . . . .	2 lb.	3 lb.	4 lb.	45
	Arrow Root, <i>in tin cases</i> . . . . .	2 lb.	4 lb.	6 lb.	145
	Pearl Barley <i>ditto</i> . . . . .	4 lb.	8 lb.	12 lb.	146
	Rice . . . <i>ditto</i> . . . . .	4 lb.	8 lb.	12 lb.	
	Burnett's Chloride of Zinc . . . . .	14	28	56	

(In Steamers, double the specified number of PINTS of the Chloride.)



## INFLAMMATION OF THE BRAIN.

The symptoms are, very severe pain in the head, extreme sensibility to light and sound, wild expression of countenance and staring of the eyes: peculiarly hard and rapid pulse, restlessness, parched tongue, flushed face, and a rapid flow of ideas, with wildness of talk. Under the influence of this disease, especially when aggravated by some trouble of mind, shipmates have often done each other an injury, and even taken life. Whenever any tendency to such acts is manifested by *any one on board*, firm but temperate restraint must be used, to prevent mischief. This is the more necessary, as the complaint does not always shew itself by actual raving madness.

*Active* inflammation of the brain usually terminates fatally within four days. In a few instances it ends favourably, in inflammation of some other part, or by some evacuation.

It is brought on by external violence, the abuse of spirituous liquors, violent exercise during exposure to excessive heat, or subjecting the head, uncovered, to a vertical sun in tropical climates. When the disease arises from this last cause, it is called "Sun Stroke," which is sometimes instantly fatal.

From one to two pints of blood should be taken at the first bleeding; repeating this operation at intervals of a few hours, till the delirium or raving is overcome. Purgatives are to be employed, as the following:—Calomel (No. 3), ten grains, and Jalap (No. 2), twenty grains, mixed in syrup, or any other convenient form; or two ounces of Epsom Salts. The heat of the head must be allayed by cold water, constantly applied with towels, after which blisters may be applied to the nape of the neck, and to the temples, with advantage. The ankles may also be blistered. The feet should be bathed in warm water, and poultices applied, of equal parts of mustard and linseed meal, or oatmeal (see No. 62, page 43). The patient must subsist on toast and water, or barley-water, and gruel.

It is necessary to observe that care must be taken to avoid mistaking this disease for Delirium Tremens, or Blue Devils, the treatment for which is very different.

Brain Fever, being accompanied by great excitement and inflammation, is to be met by *bleeding*, to reduce the system; and Delirium Tremens, being a state of great exhaustion of the brain, *following* excessive excitement, requires a copious temporary use of *stimulants*, such as brandy, laudanum, &c.



## INFLAMMATION OF THE THROAT, OR QUINSEY.

This disease commences with an unpleasant stiffness and heat in the throat, attended with swelling, difficulty and pain in swallowing, and fever. The feet should be bathed in warm sea-water, and give a dose of Salts. Solid food, and all stimulants, must be abstained from, taking only sufficient nourishment to support nature. Gargle the throat frequently with warm water and vinegar, sweetened, or table salt dissolved in warm vinegar (see also Nitre, No. 10); and keep the throat warmly covered.

It is important to prevent the formation of matter in the throat, if possible, as the difficulty of swallowing will be increased, and the patient in some danger of suffocation. If the inflammation does not subside in the first twenty-four or forty-eight hours, give an Emetic, and apply a blister to the throat.

If the symptoms are not checked, and the patient is robust, and of strong constitution, take a pint of blood from the arm. Apply a mustard poultice (see No. 62) to the neck, or blister the throat with No. 66, and let him freely inhale, from the spout of a teapot, the *steam* of hot vinegar and water.

Should matter form in the throat, a large poultice, applied warm round the neck, will afford great relief. Attention must be paid to the bowels, that they are freely open; Calomel (No. 3) and Jalap (No. 2) will be good for that purpose.

---

## INFLAMMATION OF THE LUNGS, AND PLEURISY.

These diseases are so very similar, that the same treatment may be used for both. They are attended with thirst, pain in the side, great difficulty of breathing, and strong inflammatory fever; the tongue is white, and the pulse quick and wiry. In Pleurisy there is always a very severe pain, generally in the left side, just below the nipple, increased by coughing or drawing in the breath, and shooting towards the breast-bone and shoulder-blade; there is also constant inclination to cough, interrupted by the pain it causes, in consequence of which, a viscid mucus collects in the air-passage, and causes



a wheezing called *rattles*. The attack commences with weakness, chilliness, and headache. Timely use of the warm bath, and care to prevent checking perspiration afterwards, frequently cuts short this very serious disease. The bowels should also be moved with an ounce of Epsom Salts, and barley-water or linseed-tea freely drunk.

The best treatment at the commencement is as follows:—Dissolve four grains of Tartar Emetic (No. 39) in half a pint of hot water; a fourth part of this mixture to be taken every ten minutes, until vomiting is freely produced. Let the patient afterwards drink copiously of warm water, to keep up the tendency to sickness, which will tend to cut short the attack.

Owing to the rapid course and fatal tendency of the disease, no delay must take place in checking its progress. Should the above treatment not be effectual in speedily removing the worst symptoms, the first thing then to be done is to bleed freely from the arm, until great relief is obtained, or faintness comes on. Open an incision with the lancet rather *larger* (*not deeper*) than usual, that the blood may flow more quickly. Immediately after the first bleeding, blister the side over or near the seat of the pain, or apply a mustard poultice (see No. 62, page 43). Should the symptoms not abate, the bleeding may be repeated in five or six hours; especially if the blood previously drawn be yellowish on the upper surface of the *clot*, or hollow in its centre.

The bowels should also be freely opened with three grains of Calomel (No. 3), and twenty or thirty grains of Jalap (No. 2), which must be repeated, with a dose of Epsom Salts (No. 9), three or four hours after, if found necessary.

If the above treatment fail to relieve the patient very considerably within the first thirty-six hours, give a cooling mixture, composed of four grains of Tartar Emetic (No. 39), and one ounce of Sweet Spirit of Nitre (No. 21), in a pint of water, sweetened; a tablespoonful every hour, or, if it produce vomiting, every two or four hours. The bleeding may be repeated a third time, or even a fourth time if the patient's constitution can bear it, and the pain and fever is not abated; continuing the blistering and other remedies. The patient should only be allowed weak tea, gruel, or arrow-root, and be kept in bed.

When the disease is checked, but a troublesome cough remains, give ten grains of Dover's Powder (No 11), with two grains of Calomel (No. 3), at bed-time, and a dose of Epsom



Salts (No. 9) on the following morning ; continuing the warm drinks, and preserving a constant warmth of the skin. During the recovery, the food should be good, and wine allowed the patient. Great care must be taken to prevent a *relapse* ; too sudden exposure to wet and cold would be very likely to occasion a most dangerous return of the attack, to avoid which, the patient should return gradually to his usual food and occupation.

---

## INFLAMMATION OF THE LIVER.

There are two causes which powerfully predispose seamen to this disease ; the excessive heat of the climates they visit so frequently, and their free indulgence in spirituous liquors.

The symptoms are, pain in the right side, under the short ribs, which is increased by pressure ; sometimes it extends to the chest, then resembling pleurisy, and often there is pain in the right shoulder ; irregular state of the bowels ; inability to lie on the left side ; and a dry cough.

The inflammation, if not reduced by the seventh or tenth day, usually ends in the formation of matter. In the former case, a bilious looseness ensues ; if an abscess form, it may break inwardly into the chest or abdomen, or outwardly through the skin.

Every exertion should be made to reduce the inflammation as early as possible. Bleed and purge freely ; let a large blister be formed (see No. 66, page 45) over the liver or part affected with soreness, and abstain from solid food and stimulants. If an abscess form and break, the patient's strength must be supported by bark and wine. If the abscess point outwardly, and threaten to break through the skin, the part should be poulticed ; it will be preferable to allow it to burst without interference, as the method of opening it without doing mischief can be understood only by a surgeon.

The Quinine Mixture, prepared as directed at page 38, will be found very serviceable.

---

## INFLAMMATION OF THE BOWELS, OR DRY BELLY-ACHE.

This is one of the most alarming complaints which can occur on board a ship, and requires *immediate medical assis'*



ance, if to be had, and, at all events, the utmost promptitude; as, should the inflammation be not soon relieved, mortification of the bowels commences, and soon ends in death, which the utmost care and skill cannot always prevent.

This disease may be brought on by neglected colds, injuries of the belly, from blows, wounds, &c. All the symptoms are sometimes produced by a neglected rupture.

Inflammation of the bowels, like the Vomiting and Purging Sickness, comes on with a previous cold fit; but the cold fit which indicates Inflammation of the Bowels is much more severe. The pain is unceasing, from the very beginning to the termination of the inflamed state. The whole of the belly becomes intolerably sore to the touch; vomiting continues at intervals throughout the disease; pulse feeble, but quick and hard; tongue dry and foul; the bowels are generally confined and inactive. This last symptom frequently arises from the stomach rejecting every medicine that can act as a purgative.

Blood ought to be freely taken away, until the patient feels faint (*see* Bleeding, *page* 48). Should the bleeding have the desired effect, the patient becomes less restless, pains less severe, and the tightness and soreness of the bowels not so considerable. To assist the bleeding, small doses of Tartar Emetic (No. 39) should be given, as five grains dissolved in a teacupful of water, and a teaspoonful every ten or twenty minutes, so as to produce a great feeling of sickness. The vomiting naturally attending this complaint is not to prevent the administration of the Tartar Emetic.

Thirty or forty Leeches, when procurable, ought to be applied; but everything will depend upon the success attending bleeding from the arm, and the use of the Tartar Emetic. Clysters are sometimes used, and with occasional benefit. When the patient is relieved, half a teaspoonful of Epsom Salts (No. 9), dissolved in a little warm water, with three or four drops of Laudanum (No. 22), and eight drops of the above solution of Tartar Emetic, may be given every four or six hours. The diet should be light, such as barley-water, gruel, tea, coffee, and so on, in *very moderate quantities*.

---

## INFLAMMATION OF THE EYES.

The eyes are red and painful, unable to bear the light, attended with headache and fever, itching and burning of the



eye, and sometimes a sensation as if sand were lodged under the eyelid. If it is occasioned by any irritating substances in the eye, these must be immediately removed. Spirits, malt liquor, stimulating food and drink of all kinds, must be carefully avoided, and the eye kept lightly covered. A mild purgative, such as Salts and Senna, should be given. Unless the inflammation be very violent, bleeding will not be necessary; in all severe cases, however, when leeches can be obtained, three or four applied to the temples, and *not too near the eye*, will do great good. To take away the heat of the eye, a soft linen rag, dipped in water, at first blood-warm, but afterwards cold, should be frequently applied. A pint of blood may be taken from the arm, and repeated in six or eight hours if necessary; the bowels well opened with six or eight grains of Calomel (No. 3), and twenty or thirty grains of Jalap (No. 2); afterwards the bowels must be kept open by gentle doses of Epsom Salts (No. 9). The eyes may be bathed frequently with a lotion composed of warm water and two teaspoonfuls of Laudanum (No. 22); a warm poultice should be applied to the eyes at night, and both of the eyes be protected from the day-light by a dark shade over them. When the pain has subsided, the following lotion applied three times a day will restore them to their natural strength:—White Vitriol (No. 52), twenty grains, dissolved in half a pint of cold water.

In obstinate cases, a blister behind each ear, and at the nape of the neck, should be applied. The diet must be low, as in any other case of inflammation or fever. There is sometimes a small ulcer at the roots of the eye-lashes; this should be gently washed with Alum-water, by means of a hair pencil or fine linen cloth. Goulard's Extract of Lead (No. 38) makes a useful wash for sore eyes; used in the proportion of ten drops to half a pint of pure water.

---

## EPILEPSY,

### OR FITS AND FALLING SICKNESS.

A liability to this disease utterly disqualifies a man for a seafaring life, as he cannot venture aloft without the risk, amounting almost to certainty, of falling a corpse on deck; or he may be attacked while holding a light among combustible matter, and set fire to the ship.



The attack is sudden; the patient falls down in convulsions, with a peculiar scream; the pulse is suspended or very irregular, the mouth is closed and frothy, the hands clenched, the eyes open and distorted, the face often turns black, and the tongue thrust out. During the fit the limbs are strongly contracted, and the whole body twists and works convulsively, with such violence as to require three or four strong men to hold the sufferer.

In a few minutes the fit abates, but is shortly renewed. After three or four returns, the patient sighs, and, although continuing senseless, passes into a deep sleep; on awaking, he has no recollection of what has occurred, but feels heavy and stupid.

The only thing to be attempted *during a fit*, is to place the patient in a cool airy situation, with his head elevated, and to protect him from bruising himself, which would aggravate the attack; cold water should be thrown on the face. Any tight clothes about the patient should be loosened; putting a piece of soft wood between the teeth, if possible, will prevent biting the tongue; *no cup or glass should be given him to drink from*, as it is almost certain to be broken, and cut the mouth.

If the fit is very severe, blood may be drawn at the earliest moment that it can be safely done.

In some instances it is preceded by pain in the head, unquiet sleep, noise in the ears, and a sensation of cold commencing in one of the limbs, and creeping upwards until it reaches the head, when the patient falls into a fit. When the sensation of cold is first felt, a piece of tape should be put tight round the limb, and twisted like a tourniquet with a small stick kept in the tape for the purpose. The tight pressure need not be continued more than a minute; and this simple apparatus may be so applied as to cause no impediment to labour. Patients have, by this means, averted the fits for months, who, without it, were attacked three or four times a week.

---

## J A U N D I C E.

This disease generally arises from, or accompanies, some other complaint, such as costiveness, disease of the liver, or the fevers peculiar to warm climates. It is characterised by



a yellowness of the skin and the whites of the eyes, a bitter taste in the mouth, pain or uneasiness in the right side, the stools clay-coloured or whitish; urine of a deep red colour; the bowels are generally costive. It comes on with disinclination to work, loss of appetite, acidity in the stomach, indicating a deranged state of the bile. When it attends a fever or liver complaint, it must be treated in the same manner as laid down in the original disease. It sometimes makes its appearance soon after a violent pain in the bowels; this is caused by a concretion, resembling a stone, lodged in the biliary ducts.

In recent and mild attacks of the bilious complaint, a Vomit (No. 39) may be taken, working it off with a plentiful supply of warm water, followed by a dose of Antibilious Pills (No. 7), or Calomel and Jalap, worked off with Epsom Salts, or Castor Oil; but in cases attended with much pain and a great degree of fever, by which it is certain that the system is in an inflammatory state, a Vomit would be highly injurious. In this stage of the disease, the bowels must be well opened, and, if there is much fever, some blood drawn from the arm; a pint of warm salt-water may be given as a clyster, and the patient put into a warm bath every second night. When the severity of the disease is subdued, but still existing, give a Mercury Pill (No. 8) and five drops of Laudanum (No. 22) every night until the mouth is slightly sore. The diet must be plain, and no wine or spirituous liquors allowed; salt meat, coffee, and anything of an acid nature must be avoided; vegetable diet, and keeping the bowels regular and open, will have the best effect in restoring the patient to health.

The obstruction to the passage of the bile from the liver to the intestines, which is the *immediate* cause of the Jaundice, may arise from the enlargement of the liver, such as often succeeds Remittent and Intermittent Fevers; or from chronic inflammation of the liver. In these cases the enlargement of the liver can generally be felt on pressure. A grain of Calomel (No. 3), in syrup or as a pill, should be given every night and morning, and about the size of a nutmeg of Mercurial Ointment (No. 33) rubbed on the inside of the thighs every evening. Apply a pitch plaster to the part, about the size of the hand, and as thick as a crown-piece.



## CHOLIC.

This complaint is known by a violent pain and distension of the bowels, attended with obstinate costiveness, and a peculiar sense of twisting around the navel, but no soreness upon pressure.

As soon as possible, give the patient forty or fifty drops of Laudanum (No. 22) in a little warm brandy and water; and foment the belly with flannels wrung out of hot water; or bottles of hot water, bags of hot salt or sand, may be substituted. An injection should also be given, made with two ounces of Epsom Salts (No. 9), dissolved in a pint of warm gruel (about blood warm); afterwards a *large* dose of Castor Oil (No. 24), or Tincture of Rhubarb (No. 19). If these fail, give from five to ten grains of Calomel (No. 3), or a drop or two of Croton Oil (No. 49) in a teaspoonful of brown sugar: as soon as the bowels are opened, relief will be obtained. When such strong doses of medicine have been given, and the bowels freely purged, costiveness is apt to follow. To prevent this, *small doses* of Castor Oil (No. 24) or Salts (No. 9) should be taken, which will bring the bowels again to their natural state.

For a *slight* Cholic or belly-ache, a little raw spirits, a few drops of Peppermint (No. 18), or a teaspoonful of Ether (No. 40), with twenty or thirty drops of Laudanum (No. 22), in a little water, will often be sufficient.

## DYSENTERY, OR BLOODY FLUX.

This disease is known by frequent purging, preceded by severe griping pains in the lower part of the belly; constant inclination to go to stool, without a natural discharge; and is distinguished from *Diarrhœa* (see page 101) by a straining and uneasy feel, as if the bowels were not emptied, and by the slimy and sometimes bloody stools. In severe cases the patient feels a bearing down, as if the bowels were falling out, and sometimes a part of the intestines does actually protrude. The stools consist of mucus or slime, often streaked with blood; when large quantities of blood are lost, it is a dangerous symptom. Seamen often suffer severely from this complaint, which is much more prevalent in hot climates than



in cold ones, especially in the rainy seasons. It frequently occurs on board ships where cleanliness and due ventilation are neglected. It is sometimes occasioned by the use of raw pork; and *bad* pork will certainly produce it.

An Emetic (No. 58, or No. 64), in most instances, will be very serviceable, given in the evening, followed by a dose of Castor Oil (No. 24) or Tincture of Rhubarb (No. 19) next morning. This should be repeated every second or third day, to procure a natural evacuation, which, when obtained, will tend much to the cure.

The following mixture may be given every three or four hours:—Take two grains of Tartar Emetic (No. 39) and six drachms of Epsom Salts (No. 9), dissolve them in half a pint of water, then add twenty drops of Essence of Peppermint (No. 18); this will be sufficient for four doses, and may be continued until the cure is effected.

If the pain be intense and long-continued, with much looseness of the bowels and inclination to go to stool, one or two grains of Opium (No. 60), or thirty or forty drops of Laudanum (No. 22), may be given at bed-time. At the commencement of this complaint, Opium should not be given by itself.

When the symptoms are very severe, and the patient young and strong, blood may be taken from the arm at the commencement. Give five Grains of Calomel (No. 3) every six hours, until three doses have been taken. One of the Sudorific Powders (No. 14) may be given every three hours at the same time; the patient keeping warm in bed. Give a dose of Castor Oil (No. 24) two hours after each dose of Calomel. The belly ought to be well fomented with hot water, applied as warm as the patient can bear it, and a large blister then applied. Relief will often be afforded by letting the patient sit over the steam of boiling water, and putting his feet and legs into water made very warm, but not too hot.

When other remedies have failed to produce a cure, the following may be tried with effect:—Mix with a tablespoonful of water as much White Vitriol (No. 52) as the water will dissolve; take one part of this, and five parts of Laudanum, mixed; give to an adult fifteen drops every four hours, increasing the dose one drop daily; a dose of Castor Oil should precede the use of it, and should be repeated every other day, without omitting the drops.

The diet should be exceedingly mild and simple; thin oatmeal, gruel, arrow-root, and toast-water only, should be



Set of Scales and Weights.  
Graduated Drop Measure.  
Ditto Wine Glass.  
Pair of Scissors.  
Two Syringes.  
Two Lancets.  
Twelve bandages of different sizes.  
One yard of Oiled Silk.  
Six yards of Calico.  
Six Yards of Flannel.  
Two ounces of Sponge.  
Two papers of Needles, Pins, and Thread.  
Tourniquet.  
Set of Common Splints.  
Two charges of Vaccine Lymph.  
One Single Truss, thirty-six inches in girth.  
One Double Do. do.  
One Elastic Catheter, No. 8.  
One Enema Syringe (*with directions*).

---

In addition to the above, Vessels carrying a Surgeon, with upwards of forty persons on board, are to be supplied as follows:—

One drachm *Tartar Emetic*.

Two drachms *Croton Oil*.

*Camphor*,

Sulphate of Zinc,

*Ipecacuanha*,

Acetate of Lead,

Nitric Ether,

Tinct. Digitalis,

Hydriodate Potass,

Ergot of Rye,

} one ounce each.

} two ounces each.

An ounce of *white* Silk Thread ought to be supplied in *every* Medicine Chest.



allowed for the first few days, or until the purging and severe pain in the bowels have ceased; afterwards, stale bread, tea, and coffee, or the broth of mutton, chicken, &c., at first thin and unseasoned, but gradually increasing in richness as the disease declines, should constitute the whole diet; on no account should spices, salt meat, spirituous liquors, or new milk, be used. The night air should be avoided, if possible.

When this disease appears on board ship, it is of the first importance to prevent its being communicated to all hands on board; to do this, the most careful attention should be paid to cleanliness. The evacuations of the sick must be immediately thrown overboard, and the buckets washed out.

---

### DIARRHŒA, OR LOOSENESS.

This disease is brought on frequently by improper food, such as unripe fruits and watery vegetables, producing acrid or acid matters in the stomach, or an unusual supply of disordered bile flowing into the intestines. It is also an effect of obstructed perspiration from exposure to cold. In the Mediterranean it is often caused among sailors by drinking freely of new wine. In other warm climates, as the West Indies, spruce beer, and other fermented liquors, often occasion it. Sudden changes from the long-continued use of salt provisions to fresh meat and vegetables, will cause an attack; when arising from change of diet, remedies will seldom be necessary, as it generally goes off in a few days.

It is not always to be considered a disease, as it is sometimes evidently an attempt on the part of nature to cure one, and therefore ought not to be checked *too suddenly*, especially if fever be present.

As, however, it is generally the first symptom in an attack of Asiatic Cholera, immediate attention should then be paid, (see Directions, page 120). The first thing to be done, if Cholera is likely to commence, is to give an emetic of Ipecacuanha (No. 58), and the following morning give twenty-five grains of Rhubarb (No. 4) and ten grains of Magnesia (No. 25), in a little water, with a few drops of Essence of Peppermint (No. 18). Should it continue after this, give twenty or thirty grains of the Astringent Powder (No. 12) every two or four hours, until the disease is checked. If the complaint arises from cold, five or ten grains of Dover's Powders (No. 11)



may be given three times a day, observing not to drink any fluids immediately after, as they are apt to bring on vomiting. If there is much griping pain, without soreness upon pressure on the belly, five or ten drops of Laudanum (No. 22) may be given with the Astringent Powders. Clysters of warm water give great relief in all cases of Diarrhœa.

The diet should be attended to; boiled bread and milk is the best; it may consist of rice, sago, tapioca, and barley-water: arrow-root would be preferable, if on board. If there is much weakness after the attack, Bark (No. 1), or the Quinine Mixture (*see page 38*), may be given, with a little port wine or weak brandy and water; light, wholesome, nourishing food, and gentle exercise.

---

## CHOLERA,

### OR VOMITING AND PURGING SICKNESS.

This complaint may be brought on by sudden changes from heat to cold; indigestible food, as cucumbers, melons, &c., and *unripe* fruits, eaten in great quantities; poisonous or putrid food, and exposure to noxious air, arising from decayed animal and vegetable matter,

One of the first symptoms frequently is a coldness over the whole frame, but more particularly the lower extremities; immediately after which, vomiting comes on, with giddiness and great loss of strength; with more or less purging, and considerable griping pain in the stomach and bowels. Should these symptoms continue for three or four hours, cramps to an excessive degree take place in the lower extremities, commencing at the fingers and toes, and rapidly approaching the trunk. The medicines found most efficacious are Opiates, combined with Cordials; commencing with thirty or forty drops of Laudanum (No. 22) in a wine-glassful of brandy and water, and continuing smaller doses, from eight to ten drops, at intervals, as the patient's symptoms may require.

During the attack, and for some time afterwards, the patient should take very little of anything fluid, and any necessary drink should be nearly cold. After all the symptoms have subsided, half a tumbler of mulled wine, with a little toasted bread or biscuit, will do good. It is also often necessary, a day or two after the attack, to give a dose of Castor Oil (No. 24), so as to carry off any offensive matter remaining in



the bowels. Should there be also a little fever (which is often the case for three or four days after an attack of this disease), Fever Medicines (see Fever Powders, No. 14) must be given, with small doses of Seidlitz Powder (No. 48), three or four times a day.

---

There is a much more formidable disease, arising from similar causes, known as CHOLERA MORBUS, or ASIATIC CHOLERA. All the symptoms are very much aggravated in this form of the disease; the features become sharp and contracted; the face, hands, and feet, and, soon after, the whole body, assume a leaden, blue, or brown tint, according to the complexion of the individual; the pulse becomes small, or totally extinct; the skin is cold, and often damp; the tongue moist, but flabby and chilled like a piece of dead flesh; the breathing quick, irregular, and imperfect; sometimes there are rigid spasms of the legs, thighs, and loins; the secretion of urine is totally suspended. Violent purging of a thin liquid, like whey or barley-water, takes place, and is one of the most dangerous symptoms of Asiatic Cholera.

The patient should immediately be laid in bed, wrapped up in hot blankets, and warmth should be sustained by dry heat. Poultices of equal parts of Mustard and Linseed Meal, or Oatmeal, applied to the stomach, particularly when pain and vomiting exist; bottles of hot water, or bags of hot salt, should be kept constantly applied to the soles of the feet, care being taken not to *burn* the feet; white wine whey with spice, hot brandy and water, a teaspoonful of Essence of Peppermint (No. 18), or Spirits of Hartshorn (No. 17), in a glass of hot water, frequently repeated; if the stomach will bear it, warm broth, with spice, may be employed. In severe cases, where medical aid is not to be had, from twenty to sixty drops of Laudanum (No. 22), or even three or four Opium Pills (No. 60), may be given promptly, with any of the warm drinks recommended.

By thus vigorously meeting the disease early, a safe cure is comparatively easy. Having succeeded in overcoming the attack, and subduing all the dangerous symptoms, the same treatment may be observed for the restoration to health as recommended for the common Cholera.

The disease, when protracted to the fifth, sixth, or seventh day, seldom proves fatal. When it terminates favourably,



there is a gradual diminution of the symptoms, followed by sleep, and a gentle moisture on the skin.

The unfavourable symptoms are, strong cramps in the legs or arms; convulsions; great prostration of strength; cold, clammy sweat; intermitting pulse; and swelling of the belly.

It is very necessary to point out the precautions to be observed for preventing, as much as possible, the spreading of this terrible disease. All decayed articles, such as rags, cordage, paper, old clothes, &c., should be burnt; filth of every description removed; clothing and furniture should be well washed in water; cleansing of wood-work should be performed by a strong ley of soap and water; free and continued admission of fresh air to all parts of the ship and furniture should be enjoined.

Those who inhabit filthy and badly-situated places are generally most liable to the infection. The well-clothed and well-fed, by temperance and exercise, may escape it, especially if they can occupy their minds cheerfully; but the ill-fed and ill-clothed, and also the *intemperate*, whether in meat, drink, or other gratifications, are most assuredly the first and most numerous victims.

---

## THE PLAGUE.

This disease exists, fortunately, in very few countries. It prevails chiefly in Egypt, and the countries bordering on the Levant, from the autumn until the commencement of May or June. The usual symptoms are, an enlargement of the glands in different parts of the body, resembling buboes; carbuncles and spots of various colours will also appear, attended with fever, vomiting, &c. It commences with shivering, headache, &c., like a severe cold; in a short time the glands of the throat, groins, &c., swell; the eyes look dull, pain in the chest near the heart, hot and dry skin, with delirium.

Induce perspiration as soon as possible, by giving an emetic (No. 39) at the onset, with plenty of warm water to work it off. Keep the patient warm, and give him ten grains of Calomel (No. 3), and thirty grains of Jalap (No. 2), every two or three hours, until the bowels are well opened; the body may be well rubbed with warm oil for some time, and warm gruel, barley-water, &c., given him to drink. Should there be much delirium,



take a pint of blood from the arm; and rub a drachm of Mercurial Ointment (No. 33) on various parts of the body, every three hours; give three grains of Calomel (No. 3), and five grains of Dover's Powder (No. 11), every third hour. If the vomiting is troublesome, give twenty grains Carbonate of Soda (No. 46), dissolved in a wine-glassful of water, mixed with fifteen grains of Tartaric Acid (No. 47) in a tumbler, and drank while it effervesces, every half hour.

The attacks are very various; sometimes so mild as to be scarcely known as the Plague, and sometimes causing death in less than twenty hours. If a sweating takes place on the third day, it is a most favourable sign; as another, which takes place on the fifth day, generally carries off the disease. If the patient is in a sinking state, with cold clammy sweats, and discharge of blood from the bowels, give a glass of port wine every hour. Every precaution must be used to prevent this disease from spreading, it being of a contagious nature.

---

### ERYSIPELAS, OR ST ANTHONY'S FIRE.

This disease may be constitutional. It is also very liable to follow a severe blow on the head.

It begins with symptoms of fever, sometimes delirium, and sickness at the stomach. About the second or third day, the skin of a particular part of the body, generally the face, becomes inflamed. The redness commences about the eyes or nose, or one of the ears, is attended with itching and burning, and extends from the forehead to the mouth. If the disease continue, the whole of the head becomes inflamed, and often one or both eyes are closed. As the redness extends, it frequently leaves or is abated in the part where it first commenced. After some time the redness terminates in small watery pimples, or in a scaling of the skin. The fever, however, does not always suffer a remission at this period, but, on the contrary, is frequently aggravated, and, about the ninth or eleventh day, sometimes ends in death.

On its first appearance, let an emetic of one scruple of Ipecacuanha (No. 58), with one grain of Tartar Emetic (No. 39), be given, and after its operation six or eight grains of Calomel (No. 3), followed up, two hours after, by a dose of Jalap or Epsom Salts, until the bowels are well emptied. The head should be frequently bathed with warm chamomile water,



followed by hot poultices of oatmeal or bread and water;—the linseed poultice will make the skin very tender, and had better not be used, if there be a choice. Diluting drinks, such as lemonade, or water containing Cream of Tartar, barley-water, &c., should be given; stimulating food or drinks must be avoided.

If the disease continues to increase, after the bowels have been moved, the Bark (No. 1) should be given in doses of two or three teaspoonfuls every hour, in a draught of water, if the stomach will bear that quantity; otherwise give smaller doses more frequently, till the inflammation is lessened.

If the patient is young, and the pulse full and strong, the face flushed, the inflamed part full and very red, bleeding will be requisite.

Erysipelas sometimes attacks a wound, more especially if an extensive burn has been the cause; it then immediately puts on a very alarming appearance. The sore spreads; the surrounding skin becomes hot, painful, and red, and the patient becomes feverish. The wound should be frequently poulticed and fomented. As the bad state of the wound proceeds from constitutional disturbance, the state of the constitution should be carefully attended to.

During the first attack of the disease, the diet should be low, and the bowels must be kept free; if the pain be great, give one drachm of Spirits of Nitre (No. 21), and ten drops of Laudanum (No. 22), in a tablespoonful of water, and repeat the dose in three hours, if necessary. As soon, however, as the matter begins to escape, or should there be the least appearance of *mortification* (which will be known by the dark colour of the part, and the bad smell), the whole treatment should be changed: the diet should *then* be of the most nourishing kind, and a free allowance of ale, wine, and porter permitted. The Quinine Mixture (*see page 38*) should also be given.

It will be necessary to surround the limb with a calico bandage, which should be changed night and morning. The patient must be kept quiet, and the berth cool and dark.

When it attacks the extremities, it sometimes penetrates deeply, causing the formation of an abscess; even mortification may take place.

---

## LOCKED JAW AND TETANUS.

In warm climates, Locked Jaw is very apt to be produced by exposure to heavy rain or dew after a scorching sun, by



burns, bruises, gunshot wounds, or by stabs with a pointed weapon, particularly in the extremities, so as to injure the nerves and tendons of the hand and foot. The necessity, therefore, of paying great attention to such injuries is evident, for if this affection once arise, even where the best medical advice can be had, the disease is almost always fatal. It is more likely to follow injuries of the extremities, than of any other part of the body. When mortification from a bruise or a burn leaves bare the tendons or sinews, every precaution must be taken, especially if the weather be warm. On no account should the sufferer be exposed to the effects of the damp night air, which is worse than rain in our own country.

It commences with a sense of stiffness in the back part of the neck, rendering the motions of the head difficult and painful. This is soon succeeded by difficulty of swallowing; pain, often violent, about the breast-bone, and from thence shooting to the back; the lower jaw becomes quite stiff, the teeth so closely set together, as not to admit of the smallest opening. If the disease proceed further, spasms of the whole body are brought on, attended with a sense of suffocation, similar to hydrophobia. There is a violent pain of the stomach, and the belly becomes flattened and hard. The urine is voided with difficulty. The trunk, limbs, and countenance are distorted to a painful and shocking degree; the head is sometimes drawn towards the heels, and at other times towards the knees. A remission of the symptoms occasionally takes place, but they are renewed with aggravated force by the slightest causes, even the least motion of the patient, or the touch of an attendant. Finally, a general convulsion puts a period (generally in about four days) to a most miserable state of existence.

If the disease proceed from a wound, it may be washed with hot water, and dressed with Oil of Turpentine (No. 15). An injection of tobacco (made by infusing one drachm in a pint of boiling water, for about *ten minutes*, as directed at page 80) may be given, to produce fainting and relaxation of the muscles, as soon as the bowels are cleared (or even before, if the symptoms are urgent), and repeated in a few hours. Clysters made by adding two tablespoonfuls of Oil of Turpentine (No. 15) to a pint of gruel, made *thick*, have also been of great benefit.

At the outset of the complaint, one scruple of Calomel, in a little butter or lard, should be put at the back of the tongue, for the patient to swallow, and about an hour after, a drop or two of Croton Oil (No. 49), to unload the bowels,—which is



of importance to be done. Quinine should also be given in large doses.

If there be an abscess, it should be punctured with the spare lancet, so as to allow a free discharge of matter.

If the patient be able to swallow, give Opium (No. 60) in large quantities, as four or five grain pills every hour, or three drachms of Laudanum (No. 22) every half hour. With the first dose of Opium, give ten grains of Calomel (No. 3), and every three hours a dose of five grains, until the mouth be affected. Mercurial Ointment (No. 33) may also be well rubbed on the spine, thighs, and legs. When no longer able to swallow, inject a tablespoonful of Laudanum in warm water, as a clyster, every half hour, and let the patient retain it as long as possible.

In case of great inflammation, blood may be taken from a strong man.

Care must be taken to keep up the patient's strength, by administering frequent stimulants of hot brandy and water with a teaspoon, if the heart's action appears to be enfeebled. Arrow-root, wine, and beef-tea may be given, if the patient can swallow, as want of nourishment is often one cause of death. In a desperate case, therefore, nourishment should be administered by throwing it into the bowels (as a clyster) when there is no other means, the teeth and jaws being set fast.

---

## RHEUMATISM.

This disorder is of two kinds, one with, the other without fever.

In the first, or Acute Rheumatism, the patient complains of severe pains in different parts of his body, particularly the large joints, the pains increasing when in bed, and the joints being red and swollen, the least motion giving great pain; the tongue covered with a white fur; great thirst, and fever.

On the first attack, take half a pint or a pint of blood from the arm, and give a dose of Castor Oil (No. 24) or Epsom Salts (No. 9) to open the bowels freely, repeating this if necessary; then give five grains of Dover's Powder (No. 11) with one and a half grains of Calomel (No. 3) every four hours; and should the pain and symptoms not be relieved in twenty-four hours, repeat the above. The Rheumatism of seamen is, however, generally the consequence of the use of Mercury, and hence the



Calomel (which is a preparation of Mercury) must be omitted as soon as the mouth becomes sore. Also, if any tendency to raving appear, the Dover's Powders must be omitted. The inflamed parts are to be fomented with warm water, or hot chamomile tea.

The diet must be light, and plenty of warm drink, such as barley-water, gruel, &c., should be taken.

When fever has subsided, and the pain is confined to one part, blisters will prove useful. Great care must be taken to prevent a relapse, which frequently occurs.

In the Chronic Rheumatism, the patient complains of fixed, and at other times wandering pains in the limbs, joints, and loins, mostly upon moving, accompanied with stiffness and a sense of cold, but without feverish symptoms. This form of rheumatism seldom affects more than one or two joints at a time. In the treatment of these cases, nourishing food, gentle exercise, wrapping the affected parts in flannel, and rubbing them with the Volatile Liniment (see No. 17, page 32), twice or three times a day, will afford much relief. When the pain is fixed, blistering the part will be useful; ten grains of Dover's Powder (No. 11) may be taken at bed-time, and a warm bath every second or third night may be used. In long-continued and obstinate rheumatic affections, leeches applied to the part will be serviceable, and blisters kept constantly running, by dressing them with Basilicon (No. 31) once or twice a day.

In approaching a cold climate, and while in that latitude, flannel should be immediately put on next the skin: the master of a vessel should attend to the clothing of his crew, and see that its warmth increases in proportion to the coldness of the weather; he should also, as much as possible, prevent the men's sleeping on damp beds, or in wet apparel.

---

## LUMBAGO, OR PAIN IN THE BACK.

This disease is a species of rheumatism in the loins, brought on generally by exposure to cold when heated; it sometimes comes on by degrees, but more commonly suddenly; the patient, on stooping down, feels, in the act of rising, a most acute pain in the small of his back, so severe that he cannot stand upright, or walk, without great agony.

The loins should be well rubbed with equal parts of Hartshorn (No. 17), Laudanum (No. 22), and Sweet Oil (No. 26),



mixed together. The back may be fomented with warm water, and if the pain will permit of it, a warm bath would be very serviceable; the loins should be bound round with flannel (*new*, if possible). Should it continue longer than a week, the part is to be blistered, the patient kept in bed, and a Sweating Powder (No. 14) given occasionally, covering him well with bed-clothes.

One of the following pills should be given every night (unless the mouth becomes tender) until the pain is removed: Opium (No. 60), and Calomel (No. 3), of each twelve grains, mixed well together with the bolus-knife, on a pill-tile or the back of a plate, with treacle, and made into *twelve* pills.

It will not be necessary to alter the usual diet, unless there is fever present; but avoid exposure to cold.

When the pain arises from a sprain or bruise, see Oil of Turpentine, No. 15, page 31.

---

## COUGH.

This complaint is not much attended to by seamen; nor are they much troubled with it while at sea, but more when approaching land. By attention to clothing, during exposure to cold or wet, wearing flannel next the skin, avoiding ardent spirits, and all strong stimulants; at the same time taking one or two tablespoonfuls of the following mixture, three or four times a day, it will soon disappear:—Take of thin Linseed-tea (see No. 50), half a pint; Laudanum (No. 22), one teaspoonful; Nitre (No. 10), one drachm; Sugar, two ounces; Tartar Emetic (No. 39), one grain; these are to be *well mixed* together. A teaspoonful of Paregoric (No. 23) in a little water will sometimes afford relief, but should not be taken when there is any inflammation of the lungs, or difficulty of breathing: see also Nos. 27, 28, and Gum Arabic (No. 51). An Emetic (see No. 64) is often sufficient to remove the cough, without other medicine. If much distressed with it, the chest should be blistered, and the feet put into warm water. Attention should also be paid to the state of the bowels, which should be kept freely open with Epsom Salts (No. 9).

If the cough be long continued, and attended with much spitting, or a pain in the side, blood may be drawn from the arm, and the chest blistered, renewing the blistering once a fortnight. Strengthening Plaster (No. 35), spread on a soft



# INDEX OF CONTENTS.

	PAGE
Abscesses (see Boils)	92
Acid of Lemons (No. 55)	41
Acidity of the Stomach (see <i>Indigestion</i> ).	
Acute Rheumatism	125
Adhesive Plaster (No. 36)	36
Æther (No. 40), use of, in faintness	37
AGUE, or Intermittent Fever	98 to 102
Ale or Porter, when hard or sour, how to render it drink- able (see Carbonate of Soda, No. 46)	39
Alum (No. 54), use of, for gargles	41
Anchorage, change of, at sickly stations	25
Ankle, Dislocation of the	70
Anodyne or Soothing Liniment, how to make	65
Antibilious Pills (No. 7)	29
Antidotes to Poisons	143 to 145
Antimonial Powders (No. 14)	31
APPARENT DEATH—	
From Drowning	138
Strangling or Hanging	141
Choking	141
Cold	142
Noxious Vapours and Lightning	142
Apoplexy	130
Arm, Dislocation of the	67 to 69
" Fracture of the	76
" Wounds of the	55
Arrow-root, how to prepare	145
Arteries and Veins; the mode in which the Blood is con- veyed to and from the Heart	54
ARTERY, WOUNDED, how to be treated	54 to 57
" " how to tie	55
Asiatic Cholera	120, 121
" " Precautions against	121
Asthma	128
Astringent Powders (No. 12)	30



leather, of the size of the hand, may be applied between the shoulders; or, take common pitch of the ship, spread in like manner, and sprinkle on it two or three grains of Tartar Emetic, applying it over the breast-bone.

---

## ASTHMA.

This troublesome and sometimes dangerous complaint commences with great wheezing and shortness of breathing; countenance flushed, great anxiety, hollow voice, and small pulse when lying down. A smart Emetic (see No. 39) relieves the patient quicker than any other remedy. The bowels should be well opened with Castor Oil (No. 24), Epsom Salts (No. 9), or any active purge: also, blister the chest, and put the feet in warm water. Give a dose of Fever Powders (No. 14) every four hours, in a little gruel. Animal food, beer, and spirits, must be abstained from; and the blister is to be kept open by Basilicon (No. 31); or, if it heals too soon, another must be applied.

---

## VOMITING OF BLOOD.

This differs very much from *spitting of blood*, which is a symptom of Consumption, in which the blood is coughed up from the *lungs*; while vomiting of blood proceeds from the stomach, is generally mixed with undigested food, comes away in larger quantities, is usually preceded by a sense of weight and dull pain a little below the pit of the stomach, and a tendency to throw up the contents, but unattended with cough.

It may arise from various causes, a few only of which need be mentioned, the others not admitting of relief. The chief causes among seamen are,—habitual drunkenness, swallowing poisonous substances, scurvy, or some external violence or great strain of the body. If arising from scurvy, or poison, the treatment prescribed under the proper head must be used for its cure. If owing to drunken habits, strict abstinence and great quiet must be observed; as long as the bleeding continues, scarcely any food should be taken, merely drinking the very coldest water that can be had; ice may be applied to the stomach. Give two tablespoonfuls of the follow-



ing mixture every third hour, — Laudanum (No. 22), two drachms; Elixir of Vitriol (No. 20), forty drops, or half a teaspoonful; one or two tablespoonfuls of treacle, and half a pint of water, mixed.

If accompanied by heat of the skin, or other symptoms of fever, or if the complaint be owing to violence or over-exertion, take blood from the arm, and foment the stomach, placing the feet in warm water. The patient's berth should be cool, and all causes of irritation avoided. Unless the bleeding from the stomach become alarming from its quantity, it will be advisable not to arrest it by astringents, but suffer it to stop of itself. The day following, give a mild laxative, as of Cream of Tartar, Castor Oil, or a small dose of Salts, to remove the blood from the bowels. Lemonade, &c., should be given for drink. He should subsist for two or three days on light food, as barley, rice, broth, &c.

---

## BLEEDING AT THE NOSE.

This seldom proceeds to such an extent as to endanger life, and should not be too early checked. However, if the person begins to be enfeebled by loss of blood, wet the head and neck frequently with cold water, letting it run down the back; and bathe the feet in warm water. In severe cases it may be necessary to sit in cold water, or on cold wet clothes next the skin. If the bleeding continue, apply astringents, as the following:—Dissolve two teaspoonfuls of Powdered Alum (No. 54) in half a pint of water, or one drachm of White Vitriol (No. 52) in the same quantity; small pieces of rag or lint dipped in either of these (or in vinegar, or turpentine) should be put into the nostrils, so as to stop them up. The head should be raised, and the nose bathed with vinegar or spirits and water; cold water may be drank freely.

Two tablespoonfuls of the following medicine may be given every three hours: Laudanum (No. 22), two drachms; Elixir of Vitriol (No. 20), one drachm; mixed in half a pint of water, and sweetened with treacle or sugar.

Persons subject to this complaint should avoid a costive habit, and move the bowels frequently by a draught of seawater or a dose of Salts. If this be insufficient to prevent its return, take blood from the arm. Abstain from stimulating food and drinks.



## APOPLEXY.

Apoplexy is caused by too much blood pressing on the brain. Elderly men, especially if stout and short-necked, are most liable to be attacked. Intemperance in liquor, full meals, exposure to a hot sun, violent excitement of body or mind, and long stopping or lying with the head down, or anything that tends to drive the blood to the head, will bring it on. Sometimes the person falls down suddenly, motionless and often insensible; the pulse, at first full and quick, soon sinks; the breathing slow, difficult, and snoring; at other times there is previously violent headache, high fevers and delirium, as in the case of Sun-stroke. The attack is sometimes so severe as to cause instant death, but it is not generally a very common disease among sailors, unless brought on by drunkenness. It may be necessary to caution against the use of Smelling Salts, or similar means, the use of which in Apoplexy would be highly dangerous.

The sufferer should *immediately* be removed into the shade, and the air, if necessary, cooled by fanning; let the patient be placed in an upright posture, supporting the head, to prevent any bend in the neck; every article round the neck should be loosened or removed; the head shaved, and kept cold by frequently bathing with equal parts of cold water, vinegar, and spirits; if there is any inclination to vomit, it should be assisted.

Blood should be drawn from the arm, to the extent of a pint and a half, or two pints. The difficulty, in apoplexy, of getting the blood to flow, may make it necessary to open a vein in both arms at the same time. If, however, the face be pale, the hands and feet cold, and the pulse weak, bleeding ought not to be used.

Bags of hot salt or sand may be applied to the feet, and between the thighs, or the legs placed in hot water; a large blister (see No. 66, page 45) should be formed on the back of the neck, between the shoulders. Ten grains of Calomel (No. 3), with fifteen grains of Jalap (No. 2), should be given immediately.

The bleeding and blistering may be repeated, if the violence of the attack is not checked. Should the patient recover his senses, and the power of using his limbs in some degree return, give smaller doses, as two grains of Calomel, with eight or ten of Jalap; it will then be sufficient to keep the bowels



open with Castor Oil, Salts, or Rhubarb and Magnesia. The food must be plain.

---

## DRUNKENNESS.

More excuses may be made by sailors for indulging in this vice than by any other class of men; but the diseases arising from drunkenness are many,—the most frequent are brain fever, apoplexy, liver complaints, dropsy, sudden death, and evil accidents, such as bruises, fractures, dislocations, and drowning, as well as the inability of a confirmed drunkard to fulfil his duties properly, even when sober for the time.

In the frigid zone, spirituous liquors have, doubtless, often saved the lives of those who have fallen overboard, or have been otherwise long exposed to the effects of intense cold. On reaching a very warm climate, spirituous liquors should be drunk very sparingly, *if at all*.

The symptoms of excess in drinking are nearly those of apoplexy, viz., lying in a state of insensibility, motionless, the face flushed, and snoring, as in a deep sleep. This is a very dangerous state, and may terminate fatally, if it be not soon relieved.

The effects of excessive drinking are too often fatal, from the little attention paid to the unfortunate and helpless object. The vulgar notion that *nothing can hurt a drunken man* has formerly been the loss of many a life. From this very erroneous opinion, when a person has become what is termed dead drunk, he is suffered to roll and tumble about, almost without notice. He is then in the greatest danger. The quantity which he has drunk generally begets an inclination to vomit, in attempting which he gets his head downwards, and not being attended to, that situation, added to the tightness of his shirt-neck, or neck-cloth, produces suffocation.

The first step should be to loosen anything which is about the neck, and to place the body in a lying position, with the head and shoulders raised; if the patient is suffered to sit, there is danger of his head hanging down upon his breast, by which the circulation of the blood in the neck is obstructed, and an apoplectic state is brought on. The *head* should likewise be kept cool, and bathed with cold water, if necessary. During the time that he is so extremely drunk, he must not be left alone, lest he tumble out of bed.



If the power of swallowing remains, the stomach should be emptied by means of twenty grains of Ipecacuanha (No. 58), and one grain of Tartar Emetic (No. 39), mixed in a small proportion of water; or twenty grains of White Vitriol (No. 52) may be given: a feather, or the finger (guarding against the closing of the teeth), should be thrust down the throat, moving it backwards and forwards, or rather from side to side, so as to excite the vomiting, which is often very difficult.

Salt water may be freely given, to encourage vomiting; and when the stomach is settled, one ounce of Castor Oil (No. 24), or a dose of Jalap (No. 2) and Cream of Tartar (No. 5), may be given, so as to open the bowels freely. When vomiting can be produced, it is a favourable symptom; but in case it cannot, and the symptoms remain, blood should be drawn from the arm to the extent of a pint or more, and another Emetic given.

If, notwithstanding these precautions, he should sensibly become cold, and appear to be growing worse, a Clyster must be given without delay, composed of equal parts of wine and hot water, with a small tablespoonful of flour of mustard, or a teaspoonful of powdered ginger or pepper. Rum, brandy, or gin, mixed with six times its quantity of hot water, with the addition of mustard, &c., may be used instead of wine. To keep up a proper degree of warmth of the body, the same means must be used as directed under the article *Drowning*.

The thirst and sickness of the stomach occasioned by drinking strong liquors often induces people to remove it by taking what is hurtful. The safest drinks at such times are toast-and-water, or tea; see also Carbonate of Soda (No. 46) and Seidlitz Powder (No. 48).

---

## INSECTS, SAND, AND OTHER SUBSTANCES IN THE EYES.

If a grain of sand, an insect, or any small substance, get into the eye, it will produce irritation and inflammation, and may even cause dimness, or entire loss of sight.

When the substance lies loosely on the surface of the eye, it may be easily removed by means of a camel-hair pencil dipped



in oil; or, what is for the most part more easily procured, a bit of paper rolled into the size of a quill, and softened in the mouth. If there is any difficulty in perceiving it, or in removing it when seen, open the eye firmly, turning the upper eyelid outwards, and let an assistant inject warm water freely upon the eye, with the syringe. Dropping a solution of Gum Arabic into the eye is sometimes efficacious in removing foreign substances, such as sand, &c.

When the substance is fixed in the coats of the eye, an accident frequent among blacksmiths, and termed by them fire in the eye, it may be removed by the *tongue*, or by a fine feather, or camel-hair pencil.

If there has been much inflammation, the eye may be fomented with warm water, and a poultice applied between two pieces of *very thin* linen, oiled. Give a Blue Pill (No. 8) at night, and a dose of Salts and Senna next morning.

---

## INSECTS, AND OTHER SUBSTANCES, IN THE EAR.

The opening into the outer ear, as far as the drum, is only about half-an-inch, and is defended by a sort of down, and by a kind of soft wax. Bugs, and other insects, sometimes creep into the ear, and occasion much uneasiness. Insects may be killed by dropping in a little Sweet Oil (No. 26). Peas, and such small hard substances, must be extracted by means of a pair of small forceps, or the *head* of a bent pin.

---

## TOOTHACHE AND GUM-BOIL.

There is sometimes a difficulty in deciding whether the pain proceeds from a decayed tooth or not, as the jaw is liable to gum-boil, rheumatism, &c. For the real toothache, extraction will be the only certain cure, but in most cases it cannot be done when at sea; other remedies may then be had recourse to. Should the pain follow exposure to cold, it may be removed by taking opening medicine, and then inducing perspiration by the following method, viz., placing the feet in hot salt water; going immediately to bed; being covered with plenty of bed-clothes.

Should the tooth be decayed, a small pill, made with half a



grain of Opium (No. 60), with or without half a grain of Camphor (No. 42), may be put into the hollow, and will in most cases give relief. Or mix one drachm of Alum (No. 54), *finely powdered*, with two teaspoonfuls of Sweet Spirit of Nitre (No. 21); in this soak well a piece of cotton or lint, and put it into the aching tooth, or along the gum beside it; or dissolve a little Camphor (No. 42) in a little brandy or other spirits, and apply as above; or equal parts of Æther (No. 40) and Laudanum (No. 22); or Laudanum by itself. Each and all of these remedies (except extraction) occasionally fail; but in case of necessity they may be tried.

GUM-BOIL may arise from exposure to cold, the use of Mercury, or injury to the part; it may be easily distinguished from toothache by the swelling of the face, which is sometimes so great as to close the eye of the affected side. A swelling will be found in the part where the gums and inside of the cheek join, which, on being touched, is very painful. Relief will not be obtained until the matter which it contains has escaped; it may be let out (the sooner the better) by pushing a lancet into the swelling. The formation of matter, and the swelling and pain, may often be prevented by lancing the gum on the first appearance of the complaint.

If it is necessary to ripen the boil, a few Chamomiles (No. 41), rolled up in a clean linen rag, and steeped in hot water, may be placed between the cheek and the swelling; a roasted fig placed on the boil would be of use in relieving the pain: the outside of the cheek may be fomented with hot chamomile tea, and poulticed. The bowels should be freely opened with Epsom Salts.

When the boil has broken, the mouth should be frequently rinsed out with water, as warm as can be borne. The day after, the mouth may be washed with alum-water, to heal the wound.

---

## MUSQUITO BITES.

When bitten by Mosquitoes, avoid destroying the skin by scratching the itching part. Rubbing the parts with Sweet Oil (No. 26), with Vinegar, Lime-juice, or Spirits in which Camphor (No. 42) has been dissolved, will afford relief. These applications will be of service in cases of bites or stings from other poisonous reptiles or insects. It will be advisable to



give also a dose of Jalap combined with Calomel (Nos. 2 and 3), to open the bowels. When liable to Musquito bites, exposure of the skin during sleep should be avoided as much as possible, by covering the face and hands with thin muslin, or rubbing them with lemon-juice or vinegar.

---

## THE ITCH.

This disease is generally produced by being in contact with an infected person, and much aggravated by a want of cleanliness. Give a dose of Epsom Salts twice a week, and a teaspoonful of Sulphur (No. 6) every morning, in treacle or in sugar and water. An Ointment, made of one part of Sulphur and two parts Lard or Cooling Ointment (No. 34), to be well rubbed over the body every night until cured. The linen should not be changed or washed till he is cured; bathing will then be useful, if circumstances permit. Care should be taken that all the clothes worn at the time he is labouring under the complaint should either be burnt, or boiling water poured over them when well washed.

---

## FROST-BITE, AND CHILBLAINS.

When the extremities of the body are exposed to severe cold, they are first affected with numbness, changing to a dull red colour, and afterwards with swelling and inflammation. Seamen exposed to intense cold in the North and South Seas, have occasionally lost their toes, and some the greater part or even the entire foot. Mortification may advance with surprising rapidity, unless the parts are rubbed in time, with snow and cold water.

If there is wind as well as severe cold, and particularly if a person is worn out by hunger, watching, and fatigue, the great danger is in his giving way to *sleep*. Death is the almost invariable result. Seamen or others, who are cast away, or by any circumstances placed amid snow or ice, should therefore shake and rouse their comrades, and determinedly resist the tendency to sleep.

Those who are "cold-struck" become very pale as well as cold. The pulse feels like a thread, and as if ceasing to beat at all. The breathing becomes fainter and fainter; the legs and arms are flexible while life lasts.



FROST-BITE attacks the exposed parts, particularly the extremities. The nose, ears, fingers, and toes, usually suffer. Persons addicted to drink always suffer more severely than the temperate, because they have less constitutional strength to resist the influence, and any injury is more likely with them to end in *mortification*, which is the chief danger to be apprehended.

Those who are "cold-struck" may not themselves be aware of it, until told by a bystander, who may have noticed the change of the natural colour. This is more particularly likely to happen when the nose and ears are attacked. Immediately on perceiving the numbness, the part should be *rubbed with snow*, which, when at hand, is the best known remedy; where snow cannot be had, rub and bathe it frequently with cold spirits and water, and cover it with flannel.

The sufferer must keep *away from the warmth of fire*; all use of stimulants, or of warm fomentations, &c., must be carefully avoided, until the circulation and feeling are perfectly restored to the part affected. Unless these precautions are carefully attended to in time, chilblains will be brought on, gangrene may commence, and advance to mortification with alarming rapidity.

In the advanced state of Frost-Bite, the part shrinks and becomes of a dirty pale colour, like *tallow*, and is motionless and insensible.

When a high degree of inflammation has ensued, the part should be dressed, at first with *cold* and afterwards with *warm* poultices, made stimulating by the addition of Oil of Turpentine (No. 15); and Basilicon Ointment (No. 31) should be used, to bring away the sloughs (as the dead portions are called) and complete a cure by the healthy flesh repairing the injury.

Give nourishing animal food, ale, or wine, and Bark or Quinine; poulticing constantly. Should it turn to an ulcer, touch it occasionally with Lunar Caustic.

When the inflammation is subdued, the ulcers may be dressed with Basilicon Ointment (No. 31), with the addition of a little Oil of Turpentine, and afterwards with Turner's Cerate (No. 32). Sudden changes of temperature should be avoided as much as possible, while under treatment.

All parts which have been "cold-struck" continue weak and very sensible to cold for some time.



CHILBLAINS are occasioned by sudden changes of temperature. People who rush to a fire to warm their feet and hands, after long exposure to cold and damp, are liable to chilblains, for the same reason that eating heartily after long fasting brings on inflammation of the stomach. There are three degrees of this affection. First, the skin is lightly swelled and in red patches, with tingling, itching, and pain. In the second form the skin is blistered, the edges of the chilblain are blue or purple. In the third, the part, from being of a bluish colour, turns quite black, with ulceration and sloughing. Those who are disposed to rheumatic affections are most liable to have chilblains, and of the worst description.

Bathe the part with spirits, and cover it with a rag steeped in Turpentine, or poultice the part with a mixture of one teaspoonful each of mustard and common salt, and a little water. Where blisters are raised, puncture with the point of a needle to let out the fluid. It is at all times proper in such cases to rub the part gently, until it feels hot and smarts. In the second kind of chilblains, the blisters should not be opened or broken. Cover the part up with cotton or flannel.

Where there are ulcers and "sluffs," poultices are necessary; but in a day or two, Basilicon Ointment (No. 27), with the addition of Oil of Turpentine, is the most suitable dressing.

---

### DIRECTIONS FOR RESTORING SUSPENDED ANIMATION.

*Lose no time; but do things quietly and orderly.* Avoid all rough usage, crowding and hurrying.

*Never* hold up the body by the feet; nor shake nor roll it, nor rub with salt or spirits. Do not inject tobacco-smoke, or infusion of tobacco, nor attempt to take away blood.

In all cases of apparent death, three objects ought to have immediate attention:—

First,—To remove every hurtful cause. Second,—To restore breathing. Third,—To regulate the temperature of the body; observing that the strength and heat of all the remedies and means, so as to be kept at about *blood-heat*, is important.

If the *mouth* be closed, it should be opened if possible, to allow any fluids in the *mouth* to escape freely, and at once.



Bandages (see Fractures)	71 to 78
Back-ache, or Lumbago	126
Back, Pains in the, from a Sprain, &c., (see Oil of Turpentine, No. 15)	31
Balsam Capivi (No. 28) use of	34
Balsam of Life, or Friar's Balsam (No. 27)	34
Bark, Peruvian (No. 1)	27
Barley-water, how to prepare	146
Basilicon, or Drawing Ointment (No. 31)	35
Bed-Sores	73
Belly-ache, or Colic	116
Bilious Complaints (see <i>Jaundice</i> )	114, 115
(See also Calomel, page 28; Purgative Pills, page 29; and Mercurial Pills, page 29).	
Bites of Serpents, Reptiles, or Mad Animals	62, 63
Bitters, ingredients for making (No. 43)	38
Bitter Tincture (No. 44)	38
Black Draught, how to make (see Senna, No. 61)	43
Black Vomit (or Yellow Fever)	102 to 105
„ „ Precautions against	106
BLEEDING, or Blood-letting:—	
Anatomical Chart of the Arm, shewing the blood-vessels	47
When not to bleed	48
When it is proper to take away blood	48
Faintness arising from Bleeding, how to remedy	48
Directions for Letting Blood	49 to 53
Preservation of the Lancet	21, 52
Use of Cupping Instruments	53
Bleeding at the Nose, how to stop	129
„ (See also Matico, page 45.)	
Bleedings, Violent, how to stop	54 to 57
Bleeding Piles, treatment of	86
Blind or Inward Piles,	85
Blistering Fluid (No. 66), use of	45
Blister Plaster, use of	45
Blisters, dressing for (see Nos. 32 and 34)	35
Bloody Flux, or Dysentery	116
Blood, Vomiting	128
Blue Pills (No. 8)	29
Blue Vitriol, or Blue Stone (No. 37)	36
Boils, or Abscesses	92
„ how to open	92
„ in the Mouth (see Gum-Boil)	133
BONES, Fractures of the	71 to 79
Bougie, directions for using	83



It is *not* water getting into the *lungs* that causes death from Drowning, but want of air.

When the body has been under water for ten or twenty minutes, there is little hope, but all possible means should be persisted in for at least two hours, and if *any signs* of returning warmth or of life appear, for much more than double that time.

Warmth of the body, and clearness of the pupils of the eyes, are the surest symptoms of life; while even the *stiffness* of the body is anything but a *certain* sign of death.

On restoration to life, one *teaspoonful* of warm water may be given, to try whether the power of *swallowing* has returned; and if *quite sure* that it has (and even then, only occasionally, and in small quantities), warm ginger tea, spiced negus, warm ale, or a little weak spirit and water. *Nothing* should be given inwardly by the mouth, until the power of swallowing is *quite restored*; but, on the contrary, every precaution taken to keep both the mouth and nostrils free from *mucus* and froth, by constantly and carefully wiping it away.

When recovery seems established, he should be put to bed in warm blankets, and a strict watch kept for some hours; any disposition to sleep should be encouraged, except in cases of apoplexy, and excessive intoxication. Great care is requisite to maintain the restored vital actions, and at the same time prevent undue excitement, causing fever. After a few hours, he will suffer from severe headache and fever, which must be relieved by purgatives and bleeding, with low diet. An emetic, made by mixing a tablespoonful of mustard in a tumbler of water, may be given.

### APPARENT DEATH FROM DROWNING.

1. With the least possible delay, even as soon as the patient is received into a boat, he should, *without jolting*, be laid *on his right side*, on a plank, or mattress, with his head uncovered, and a little raised; the wet clothes must be quickly removed, even by cutting them open; the water let out from the mouth by opening the jaws; the mucus removed from the mouth and nostrils; the body rubbed dry, and then covered immediately with spare dry clothes, until warm blankets are ready to wrap the body in.

2. The body being laid in a warm airy place, with the face upwards, and the head and shoulders raised, strip it, and rub it quite dry. Place it on a table or mattress, not too near a



fire, with a warm pillow or bolster under the shoulders, and two for the head.

3. Wipe and cleanse the mouth and nostrils. Now, let six active persons, *and not more*, be about—

One on each side of the body; diligently, but not roughly, rubbing it all over, especially near the heart, with flannels, or dry cloths, and the hands.

A third, to apply *warmth*.

A fourth, to assist in restoring the breathing.

A fifth, to attend to the head, by constantly cleansing the mouth and nostrils; turning the head a little aside, when vomiting commences.

And a sixth to help generally, and *give directions* what to do, how to do it, and how long to continue it; attending more especially to restoring the circulation of the blood, by assisting the renewal of the suspended breathing.

4. In order to restore the warmth of the body—

Move a *hot* frying-pan, *properly covered*, several times over the chest, stomach, back, and spine, carefully avoiding the chance of *burning* the body. Whatever the cook can supply from the galley-fire, not too hot, and properly covered, will answer. It is important that the body be warmed *very gradually*.

Apply ten or twelve bags or stockings of hot sand or salt; bottles of hot water; warm smoothing-irons, hot bricks, &c., *covered*,—to the arm-pits, the sides of the body, the pit of the stomach, between the thighs, to the palms of the hands, and close to the *soles of the feet*.

Keep rubbing the body all over with the hands or with hot flannels.

If possible (as on board a steam-ship), place the body quickly into a warm bath, nearly as hot as the hand can *easily* bear; keep the head raised, and still continue to keep up the friction of the body.

A stimulating clyster, consisting of turpentine, mustard, pepper, ginger, with or without spirit, to half a pint of warm water, is advisable, and might early be administered.

5. TO RESTORE THE BREATHING, or assist it in completely returning, is, of all the arrangements, the one requiring most immediate attention:—

Having a pair of common bellows at hand, blow them twice or oftener, strongly, to clear out any dust that may accidentally be in the nozzle; then apply the pipe carefully to one



nostril, while *the other nostril and the mouth* are carefully closed by an assistant, who should with his other hand draw down and gently press backwards the upper part of the wind-pipe (known as the "apple" in the throat of man), in order to allow a more free admission of air to the lungs, when the air is passing from the bellows into the windpipe. Blow the bellows *gently*, and inflate the lungs until the breast is a little raised. The mouth and nostril should then be set free, and a moderate pressure made with the hand upon the chest, thus imitating the natural action of breathing, by gently blowing into and afterwards compressing the chest, about fifteen times in each minute.\*

A ready plan, but more defective than using the bellows, is managed by taking a deep inspiration, and instantly blowing through the mouth or nostrils of the body, closing whichever is free with the one hand, while the wind-pipe is handled, and then the chest is compressed, with the other hand.

If there be a little breathing visible, imitate it and assist it by pressing the belly rather upwards, and then the ribs downwards, alternately, *carefully attending to THE RIGHT ACT at the RIGHT TIME*,—not to depress the chest while the sufferer is inhaling. Hold smelling-salts or hartshorn, *occasionally*, to the nostrils, and tickle them with a feather.

If the patient still remains insensible, small bits of dry cork, paper, or German tinder, should be burned on the pit of the stomach, on the thighs, and on the arms. If the limbs be warm and easily bent, but the face getting purple or black, and the eye-balls staring, blood may be taken from the arm, or from the foot.

While treating of this important subject, we may remark, that learning to swim *well* is so important to an able seaman, and frequent *bathing* or regular washing of the whole of the body is so necessary to health, that both should be as much as possible encouraged. In bathing at sea, if some of the hands cannot swim, or if there be any chance of *sharks*, a sail, such as a lower stud-sail, should be got overboard, with the inner hawl-yards rove through a port forward, and the sheet through another, aft; the outer leeches being hauled out by whips from the lower yard-arms.

If there be only a small number of men, they should bathe to windward, and have a boat to attend them: with a large

\* These actions should be imitated upon living persons in good health, that every one may be sufficiently practised *in time of need*.



crew, and boats plenty, they had better go over on both sides, first getting out boats to attend on each side.

The time should be restricted to about ten minutes or a quarter of an hour, because more than that, without *swimming*, is not generally beneficial. The chance of accident is likewise less.

Tricks among the bathers should be most particularly forbidden, and prevented by every means. People unable to swim have been frightened into fits, through letting go the rope they were hanging on by, and drowned, with a hundred able swimmers close by.

One of the great advantages of a sail overboard consists in affording secure means of satisfying every man that salt water is strong enough to keep him afloat (if he will only give it a chance), by letting the sail go more deeply overboard under him, while he, with the back of his head well down in the water, and his face upwards, keeps gently paddling with his hands behind and under him, and raises his toes out of the water. He will soon be for paddling himself out of the sail altogether, if he is allowed, and can trust his own presence of mind.

It must be borne in mind, when lying in a river, that fresh water is not near so buoyant as salt, and that Tides are dangerous for all but powerful swimmers; also, if bathing on a beach, that the current often sweeps off shore.

### APPARENT DEATH FROM STRANGLING OR HANGING.

From the return of the venous blood being stopped by the action of the rope, &c., round the neck, the face is rendered black, the eyeballs start from their sockets, and the nostrils are wider than in natural death.

After the rope, &c., has been removed, the taking of blood from the arm, or even the jugular vein, is advisable, as well as all the other means directed under DROWNING, except artificially warming the body, which will in most cases be unnecessary. The bellows will be the most important agent.

### CHOKING FROM ANY SUBSTANCE IN THE GULLET.

If a splinter of bone, a pin, or the like be accidentally



swallowed, and stick in the gullet, it will produce great uneasiness to the sufferer, though it may not be dangerous.

A plentiful draught of water, or twirling round a large goose or swan quill, or anything of similar shape, inserted into the throat, will sometimes dislodge the substance, and make it fall down into the stomach. When the substance is large, and not far down, it may sometimes be drawn out; but if it be too far down for that, it may be pushed down into the stomach, with a thin piece of whalebone, having a piece of sponge firmly fastened to the end of it, called a probang. Even after its removal, a roughness or soreness remains, which sometimes makes the sufferer think it still there.

#### FROM TOO GREAT COLD.

Exposure to an intense degree of cold produces a general numbness, a sort of intoxication: irresistible inclination to sleep soon comes on, with loss of consciousness, and insensibility, and then the patient rarely recovers.

The body should be immediately wrapped in a blanket, leaving the head uncovered, till conveyed to a warm berth, when the clothes must be taken off, and the skin rubbed with snow, pounded ice, or cold water, rubbing *from* the body, *towards* the extremities; to be succeeded by rubbing with cloths dipped in milk-warm water,—it being important to restore warmth, *not suddenly*, but very gradually. When no snow nor ice is at hand, a cold bath, very gradually heated, may be advisable. When the skin begins to feel warm, the sufferer may be put into a cold bed, and the bellows and other means used as under DROWNING.

#### FROM NOXIOUS VAPOURS AND LIGHTNING.

It frequently happens in these cases, if the person is discovered soon, that the heat of the body is even greater than that of a living person. In this case good effects have been observed from dashing the face and the whole body with cold water, thrown in small quantities, and with some force. The effect will be still greater if the body be dried at intervals, and then the sprinkling repeated.

Everything must be removed from the neck, and pains must be taken to lessen the quantity of blood collected in the head, by the means recommended under the article HANGING. But if the body, instead of being warmer than natural, should feel



cold, or should be gradually turning colder, warmth must be kept up by the means already directed at pages 138, 139.

## POISONS.

The effects of poisoning may, in most cases, be known from sudden illness arising from natural diseases, by the following symptoms:—

If a person, previously in perfect health, be attacked, after having taken food or drink, with violent pain in the stomach, burning heat in the throat, a sense of suffocation, and retching and vomiting; or with giddiness, delirium, or raving, and an unusual drowsiness, it may be suspected that he has taken poison. Apoplexy, cholera, and inflammation, frequently appear suddenly, after a meal, but in sudden apoplexy the stomach and throat are not affected; in cholera and internal inflammation, also, there is no burning in the throat before vomiting begins, and no blood vomited; in violent colic there is no vomiting and purging. Feverish symptoms do not, *at first*, occur in cases of poisoning.

Internal inflammations, as of the throat, liver, and bowels, diseases of the heart, cholera, plague, apoplexy, and some other diseases, often have a similar character to cases of poison, and end fatally in equally short time. They may generally, however, be distinguished by some peculiar symptom, and by the individual circumstances of the case,—particularly the absence of fever at the commencement.

The effects of a strong dose of Poison usually shew themselves in a few minutes, though sometimes not for some hours after. As they sometimes prove fatal in a few minutes, and generally gain strength, rapidly and alarming, within about an hour, increasing without intermission of their severity, the proper remedy should be *immediately* used, whenever it becomes known that poison has been taken.

It is not out of place to remark here, that in many cases of accident or disease, much of the value of any directions what to do depends on the knowledge conveyed being studied at leisure moments, so as to be able to use it in time of need, without delay. The sufferer might die while the captain is reading over the different directions. The case of *a divided artery* will illustrate this.

Fortunately, at sea, poisoning is not of very frequent occur-



rence. Should it, however, happen, a remedy will be found under the different articles here treated of. (See also Sweet Oil, No. 26.)

When it is strongly suspected, from the above symptoms, that poison has got into the stomach, though it be not known what sort of poison, not a moment is to be lost in removing it, by promoting full and copious vomiting. For this purpose, the most speedy means are, the tickling of the back part of the mouth with a feather, and repeatedly thrusting the finger as far back into the throat as possible. When the gullet is much inflamed, however, none of these means can be employed. Other means to be used are given below.

POISONING BY THE STRONG ACIDS,—such as Muriatic Acid (or Spirits of Salts); Aquafortis; Oil of Vitriol.—If these have unfortunately been swallowed, give, *without losing a moment*, two tablespoonfuls of Magnesia (No. 25), mixed in half a pint of water, and repeat the dose every five minutes; or give strong soap and water, or common whiting, or chalk (if on board), in water. Vomiting should be assisted as much as possible, but, owing to the inflamed state of the throat, tickling with the feather or finger becomes impossible; lukewarm water, barley-water, or linseed tea, if it can be got ready immediately, must therefore be given speedily in large quantities. If leeches could be had, applying from twelve to thirty to the throat and stomach, where the pain is greatest, would be of service, fomenting the stomach with warm water. Should there be much pain, take blood from the arm according to the strength of the patient, and apply a blister to the stomach. *No food*, not even weak broth, must be taken, till the inflammation has subsided. When the cramps and convulsions disappear, the diet may consist of a little gruel, barley-water, linseed tea, arrow-root, &c., until the patient feels quite well; no solid food should be taken for some time.

POISONING FROM TARTAR EMETIC.—When this has been taken in *over-doses*, the vomiting, when it begins, should be promoted by a plentiful supply of plain water, or water sweetened with sugar; then give a teaspoonful of Peruvian Bark (No. 1), or three grains of Quinine (No. 45), every ten or fifteen minutes.

POISONING FROM LAUDANUM OR OPIUM.—If this article has



been taken in an over-dose, or as a poison, give immediately twenty grains of White Vitriol (No. 52), or three or four grains of Blue Vitriol (No. 37), dissolved in a *small* quantity of water. The throat, at the root of the tongue, should also be tickled with a feather; should vomiting not be produced, on account of the torpidity of the stomach, cold water dashed over the head will sometimes have the desired effect. Sleep must not be permitted, and the patient must be roused by the frequent application of a smelling-bottle, or Hartshorn (No. 17), held to his nostrils for a short time; cold water poured from the spout of a tea-kettle from a height upon the patient, will be very beneficial; if able, the patient should be made to walk about for six or eight hours, never for a minute allowing him to sleep. Give Castor Oil (No. 24) to relieve the bowels, which are generally costive from the effects of the poison.

POISONING FROM MUSSELS AND OTHER FISH.—The mussel, crab, oyster, mackarel, eel, and other fish, have sometimes produced symptoms resembling those of poison; similar effects may also be produced by eating diseased meat, rancid or rusty bacon, &c. In a few hours, or during the next day, the patient is seized with chills, acute pains in the stomach and head, restlessness, great thirst, redness and swelling of the face and eyelids, distressing itching, and red or puffy blotches all over the body, followed by convulsions, ending in death. If the symptoms shew themselves in an hour or so after the poisonous article has been taken, give an Emetic (No. 39), and cleanse the bowels with an active dose of Epsom Salts (No. 9). If a longer time has elapsed before the poison affects the system, give a dose of Epsom Salts every two or three hours, until the bowels are freely opened.

---

## COOKERY FOR THE SICK.

---

### ARROW-ROOT.

Put a small tablespoonful of the genuine powder in a warm basin, and mix it smooth with a few spoonfuls of *cold* water. Then pour about half a pint, or rather more, of *boiling* water to it, and stir it until it thickens. Being very insipid, a little sugar may be added; when the complaint will admit of higher



seasoning, a glass of wine, or a spoonful or two of brandy, and a little sweet spice, will improve it. If necessary, it may be made hot by putting it over the fire, in a clean saucepan, for a minute or two.

### WATER GRUEL.

A large spoonful of Oatmeal, rubbed smooth in a little water, should be put into a pint of boiling water (on the fire), stirring it well for a quarter of an hour, and taking care that it does not boil over. Let it settle, pour it off, and stir in a bit of butter, and a little salt.

Six ounces of oatmeal will make about half a gallon of gruel; which will keep very well for a short time.

### BARLEY-WATER.

Wash an ounce or two of pearl barley in cold water, then boil it for *a few minutes* in half a pint of water, to clean it. Drain the water off, and then add about two quarts of fresh boiling water; a little lemon-peel and a teaspoonful of sugar may be added. Let it simmer, or gently boil, down to a quart; then pour clear off.

Or wash a handful of common barley, and simmer in three pints of water; adding lemon-peel to flavour it.

It may also be flavoured with a little lemon-juice, or Acid of Lemons (No 55), if desired.

### SAGO AND TAPIOCA.

After soaking a teacupful in cold water for an hour or two (Tapioca generally requires much longer), drain it off, and add about a quart of fresh water. Let it now simmer over a slow fire until it becomes a clear jelly. It may be sweetened with sugar, or flavoured with wine, spice, &c.

### RESTORATIVE JELLY.

Put one ounce of isinglass, forty pimento or allspice berries, and a piece of brown biscuit, into a quart of water, and boil it down to a pint; then strain it clear off. A large spoonful or two may be taken in wine and water, tea, &c.



## REFRESHING DRINKS.

MULLED WINE.—Boil a bit of Cinnamon, and some grated Nutmeg (or other sweet spice), in a large teacupful of water, for a few minutes; then add an equal quantity of Port Wine, and a little sugar; when quite hot, take it off the fire.

LEMONADE.—Cut a lemon in two, and squeeze one or both halves into a jug, throwing in the lemon also; add a table-spoonful or two of sugar, and about a pint or more of hot water. Stir it round, and cool it. Half a drachm of Acid of Lemons (No. 55), or Tartaric Acid (No. 47), may be used as a substitute for the lemon or lime juice.

TAMARIND TEA, &c.—Hot water, poured on tamarinds and raisins, prunes, currant jelly, or cranberries, if on board, will be most excellent drinks during sickness: sweetening when requisite with sugar to the taste.

A tablespoonful of good vinegar, and another of sugar, in a tumbler of cold water, also makes an agreeable drink.

See also "Imperial Drink" (Cream of Tartar, No. 5); Carbonate of Soda (Nos. 46, 47); Acid of Lemons (No. 55,—Saline Draught).

---

TO MAKE A CLYSTER.

A pint of warm Sea-water, or Salt Beef Broth, two or three tablespoonfuls of Sweet Oil, and as much Sugar.

Or, two tablespoonfuls of common Salt, as much soft Sugar and Sweet Oil, and a pint of thin Gruel or Barley-water. To be put into the bladder or syringe and injected, blood-warm, when the salt is dissolved.

Clysters of warm fresh or salt water, without any addition, often cure illness arising from a loaded and torpid state of the lower bowels.

The patient should hold his breath as much as possible while the Clyster is administered.



Bowel Complaint (see Diarrhœa)	118
Bowels, Inflammation of the	111
„ Looseness of (see also No. 12, page 34)	118
„ „ not always a disease	118
„ Pain in (see Colic)	116
Brain, Inflammation of the (or Brain Fever)	108
„ Precautions against crime from this cause	108
„ Difference between Brain Fever and Blue Devils	108
BROKEN BONES, how to set	71 to 79
BRUISES or CONTUSIONS:—	
Of the Head	61, 65
„ Chest, Stomach, or Spine	66
Buboes	87, 93
Burns and Scalds, treatment of	63, 64
Calomel (No. 3), use of	28
Camphor (No. 42)	38
„ Liniment (see No. 42)	38
Capivi, Balsam (No. 28)	34
Carbonate of Soda (No. 46), use of	39
Castor Oil (No. 24)	33
Catheter, directions for using	83
Cerate (Turner's), No. 32	35
Caustic (No. 57)	42
Chamomile Flowers (No. 41)	37
„ Tea (see No. 41)	37
Chancres	86, 87
Chest, Bruises of the	66
Chilblains, or Frost-bites	135
Chloride of Lime (No. 53)	24, 41
Choking, Apparent Death from	141
Cholera, or Vomiting and Purging	119
Cholera Morbus	120, 121
Colic	116
Chordee	88
Circulation of the Blood, by the Arteries and Veins,	
described	54
Clap	85
Cleanliness, necessity of	23, 91
Clysters, how to make	147
Cold, Apparent Death from	142
„ Mortification from	136
Collar-Bone, Fracture of the	77
Contagion, how to prevent the spreading of	23, 26
Contusions or Bruises	65, 66







**NEW WORKS,**  
PUBLISHED BY  
**GEORGE PHILIP AND SON,**  
**LIVERPOOL.**

LONDON: WILLIAM ALLAN, ALDINE CHAMBERS, PATERNOSTER ROW.

DUBLIN: WILLIAM ROBERTSON. EDINBURGH: JOHN MENZIES.

GLASGOW: R. GRIFFIN AND CO., AND ALL BOOKSELLERS.

**CHEAP SCHOOL ATLASES AND MAPS.**

*In Imperial 8vo., price 10s. 6d., strongly bound in cloth,*  
**PHILIPS' COMPREHENSIVE SCHOOL ATLAS OF**  
**Ancient and Modern Geography,** comprising THIRTY-  
EIGHT MODERN AND FIVE ANCIENT MAPS, constructed  
from the latest and best authorities, engraved in the best style,  
and carefully coloured; accompanied by a Consulting Index of  
22,000 Names of Places, carefully compiled by J. H. JOHNSON.

CONTENTS.

MODERN MAPS.		
Western Hemisphere	Austria	Africa
Eastern Hemisphere	Switzerland	Egypt and Arabia
Europe	Spain and Portugal	Petræa
England and Wales	Italy	North America
Scotland	Turkey in Europe, and	United States
Ireland	Greece	Canada
France, in Provinces	Asia	Central America
France, in Depart- ments	Turkey in Asia	West Indies
Belgium	Russia in Asia	South America
Holland	Persia and Cabool	
Prussia	Hindustan	ANCIENT MAPS.
Sweden, Denmark, and Norway	China	Palestine
Denmark	East India Isles and	Orbis Veteribus Notus
Russia in Europe	Australasia	Orbis Romani, pars
Germany	New South Wales	Occidentalis
	Tasmania, or Van	Orbis Romani, pars
	Dieman's Land	Orientalis
	New Zealand	Græcia Antiqua

\*.\* The Publishers, in preparing their COMPREHENSIVE SCHOOL ATLAS, have endeavoured to produce a work embodying all the recent Discoveries in Geographical Science, and suited in all respects to the requirements of the Student. The Consulting Index has been got up with great care, and will be found to be *really an Index to the Maps*, and not as is usually the case, a mere compilation of Names, having little connection with the work it is intended to illustrate.



*In Imperial 8vo., price Five Shillings, bound in cloth,*

**PHILIPS' INTRODUCTORY SCHOOL ATLAS;** comprising EIGHTEEN MAPS OF THE PRINCIPAL COUNTRIES OF THE WORLD; clearly engraved and carefully coloured; accompanied by a Consulting Index of 9,000 Names of Places, compiled by J. H. JOHNSON.

CONTENTS.

Western Hemisphere	France, in Departments	Africa
Eastern Hemisphere	Germany	North America
Europe	Asia	United States
England and Wales	Hindustan	Canada
Scotland	East India Isles and	West Indies
Ireland	Australasia	South America
		Palestine

\* \* This Atlas is an abridgment of "Philips' comprehensive School Atlas," and is intended for the use of Junior Geographical Classes.

*In Imperial 4to., price Three Shillings and Sixpence, bound in cloth,*

**PHILIPS' STUDENT'S ATLAS of Modern Geography;** comprising EIGHTEEN MAPS, constructed from the most recent authorities, and carefully coloured.

CONTENTS.

Eastern Hemisphere	France	Africa
Western Hemisphere	Asia	North America
Europe	Australia	Canada
England and Wales	New South Wales	United States
Scotland	Van Dieman's Land	South America
Ireland	New Zealand	Palestine

*Price Two Shillings, in paper cover, or Two Shillings and Sixpence bound in cloth,*

**PHILIPS' YOUNG SCHOLAR'S ATLAS OF MODERN Geography;** containing TWELVE LARGE QUARTO MAPS, full coloured, intended as a First Class-book for Young Learners.

CONTENTS.

Eastern Hemisphere	Africa	Scotland
Western Hemisphere	North America	Ireland
Europe	South America	France
Asia	England	Palestine

*In Imperial 4to., price One Shilling,*

**PHILIPS' SHILLING ATLAS of Modern Geography;** containing NINE IMPERIAL QUARTO MAPS, Engraved on Steel, constructed from the most recent authorities.

CONTENTS.

Eastern Hemisphere	Asia	England
Western Hemisphere	Africa	Ireland
Europe	America	Scotland



## PHILIPS' SERIES OF LARGE SIXPENNY MAPS

Size—Full Sheet Imperial, 22 by 27 inches, full-coloured; engraved in the best style, and embracing all the recent Geographical Discoveries. The entire Series is now in print, and any single Map may be had without difficulty.

### LIST OF THE MAPS.

- |   |  |   |
|---|--|---|
| 1 The World, on Mercator's Projection                           | 27 Germany—Northern part                 | 55 North America  |
| 2 Northern Hemisphere   | 28 Germany—Southern                      | 56 Canada, Nova Scotia, New Brunswick, &c.                      |
| 3 Southern ditto  | 29 Prussia [part]                        | 57 United States  |
| 4 Eastern ditto   | 30 Belgium                               | 58 Mexico and Texas   |
| 5 Western ditto   | 31 Holland                               | 59 West Indies  |
| 6 North Horizontal ditto  | 32 Denmark                               | 60 Islands of Bermuda, Bahama, and Cuba                         |
| 7 South ditto   | 33 Sweden and Norway                     | 61 Jamaica [Isles   |
| 8 Europe  | 34 Russia in Europe                      | 62 St. Domingo and Virgin                                       |
| 9 British Isles   | 35 Asia                                  | 63 St. Christopher's, with Nevis and St. Lucia.                 |
| 10 England  | 36 Russian Empire                        | 64 Antigua, with Guadeloupe, &c.                                |
| 11 Scotland   | 37 Turkey in Asia                        | 65 Dominico, with Martinico, &c.                                |
| 12 Ireland  | 38 Palestine                             | 66 Barbadoes & St. Vincent                                      |
| 13 The Channel Islands, including Isle of Man and Isle of Wight | 39 Persia and Cabool                     | 67 Trinidad, Grenada, Tobago, and Curacao                       |
| 14 Chart of the Baltic Seas                                     | 40 Arabia, Egypt, Abyssinia, and Nubia   | 68 South America  |
| 15 France in Departments  | 41 Tartary                               | 69 Guiana and Brazil  |
| 16 France in Provinces  | 42 China                                 | 70 Peru, Chili, Bolivia, and La Plata                           |
| 17 Chart of the Mediterranean                                   | 43 Corea and Islands of Japan            | 71 Chart of the Arctic Regions, with all the recent Discoveries |
| 18 Spain and Portugal   | 44 India—Northern part                   | 72 Chart of the North-west Passage between Asia and America     |
| 19 Switzerland  | 45 India—Southern part                   | 73 Table of comparative Heights of Mountains                    |
| 20 Italy  | 46 East India Islands                    | 74 Do., Lengths of Rivers                                       |
| 21 Milanese States  | 47 Islands in the Pacific                |   |
| 22 Tuscany and States of the Church                             | 48 Australia                             |   |
| 23 Venetian States  | 49 New South Wales and Van Dieman's Land |   |
| 24 Naples and Sicily  | 50 New Zealand                           |   |
| 25 Turkey in Europe, and Greece                                 | 51 Africa                                |   |
| 26 Austria  | 52 America—General Map                   |   |
|   | 53 Chart of the Atlantic                 |   |
|   | 54 Atlantic Islands                      |   |

A Title-page and Contents for binding the Maps may be had, price 6d

\*.\* Complete Sets of the Maps are now ready, in atlas folio, extra coloured, and handsomely half-bound morocco, with Index, price £3 3s.

*Printed on fine Foolscap folio, price Threepence each, or by the Set, stitched in a neat wrapper, price Three Shillings,*

**A NEW SERIES OF OUTLINE MAPS**, designed by ALEXANDER STEWART. For the Use of Schools and for Private Tuition. Size of each Map, 11½ inches by 9 inches.

### THE SERIES COMPRISES—

- |                      |                 |                     |
|----------------------|-----------------|---------------------|
| 1 Eastern Hemisphere | 4 Asia          | 9 England and Wales |
| 2 Western Hemisphere | 5 Africa        | 10 Scotland         |
| 3 Europe             | 6 North America | 11 Ireland          |
|                      | 7 South America | 12 Palestine        |
|                      | 8 British Isles |                     |



*Price One Penny each plain, or Twopence coloured,*

**PHILIPS' SERIES OF PENNY AND TWOPENNY  
Maps; Size—Imperial 4to., and engraved in the best style.**

LIST OF THE MAPS.

MODERN SERIES.		16 Sweden, Denmark, and Norway	36 Egypt and Arabia Petraea
1 Western Hemi- sphere	17 Denmark	37 America	
2 Eastern Hemi- sphere	18 Russia in Europe	38 North America	
3 World on Merca- tor's Projection —Double Map	19 Germany	39 United States	
4 Arctic Regions— Double Map	20 Austria	40 Canada	
5 Europe	21 Switzerland	41 Central America	
6 British Isles	22 Spain and Portugal	42 West Indies	
7 England and Wales	23 Italy	43 South America	
8 Scotland	24 Turkey in Europe, and Greece	ANCIENT SERIES.	
9 Ireland	25 Asia	44 Palestine	
10 France, in Pro- vinces	26 Turkey in Asia	45 Orbis Veteribus Notus	
11 France, in Depart- ments	27 Russia in Asia	46 Orbis Romani, pars Occidentalis	
12 Belgium	28 Persia and Cabool	47 Orbis Romani, pars Orientalis	
13 Holland	29 Hindostan	48 Græcia Antiqua	
14 Prussia	30 China	49 Table of the com- parative Heights of Mountains	
15 Poland	31 East India Isles and Australasia	50 Ditto, do., Lengths of Rivers	
	32 New South Wales		
	33 Tasmania, or Van Dieman's Land		
	34 New Zealand		
	35 Africa		

A copious Consulting Index of upwards of 22,000 Names of Places, may now be had, price Two Shillings and Sixpence. The Series may be had, bound, with Title-page and List of Contents, price Five Shillings plain, or Nine Shillings and Sixpence coloured.

*Price Seven Shillings and Sixpence, in Imperial 4to., handsomely bound in cloth,*

**PHILIPS' SELECT ATLAS**, containing TWENTY-FOUR MAPS, beautifully printed on superfine paper, and carefully coloured, accompanied by a valuable Consulting Index, compiled by J. H. JOHNSON.

CONTENTS.

Western Hemisphere	Sweden, Denmark, and Norway	Tasmania, or Van Dieman's Land
Eastern Hemisphere	Germany	New Zealand
Europe	Spain and Portugal	Africa
England and Wales	Asia	North America
Scotland	Hindostan	United States
Ireland	East India Isles and Australasia	Canada
France, in Departments	New South Wales	West Indies
Belgium		South America
		Palestine



*Price Three Shillings and Sixpence each,*

**PHILIPS' SERIES OF MAPS FOR THE COUNTING-House, Library, or School-room; Size—22 by 27 Inches, carefully coloured, and Mounted on Cloth, Roller, and varnished.**

LIST OF THE MAPS.

The World on Mercator's Projection	Switzerland	India, Southern part
Eastern Hemisphere	Italy	Australia
Western Hemisphere	Turkey in Europe, and Greece	New South Wales and Van Dieman's Land
The above two Maps can be had joined together, and mounted as one Map, price 6s. 6d.)	Austria	New Zealand
Europe	Germany, Northern part	Africa
British Isles	Germany, Southern part	America
England	Prussia	Chart of the Atlantic Ocean
Scotland	Belgium	North America
Ireland	Holland	Canada, Nova Scotia, New Brunswick, &c.
France in Departments	Denmark	United States, including California
Chart of the Baltic Sea	Sweden and Norway	West Indies
Chart of the Mediterranean	Asia	South America
Spain and Portugal	Russian Empire	Comparative Heights of Mountains
	Palestine	Do. Lengths of Rivers
	China	
	India, Northern part	

*Just published, handsomely bound in cloth, price Ten Shillings and Sixpence,*

**PHILIPS' CABINET ATLAS, in a Series of THIRTY-NINE IMPERIAL QUARTO MAPS, embracing the Principal Countries of the World, engraved from the best authorities, and carefully coloured in Outline, with a copious Consulting Index.**

CONTENTS.

Western Hemisphere	Germany	New South Wales
Eastern Hemisphere	Austria	Tasmania, or Van Dieman's Land
Europe	Switzerland	New Zealand
England and Wales	Spain and Portugal	Africa
Scotland	Italy	Egypt and Arabia
Ireland	Turkey in Europe, and Greece	Petræa
France, in Provinces	Asia	North America
France, in Departments	Turkey in Asia	United States
Belgium	Russia in Asia	Canada
Holland	Persia and Cabool	Central America
Prussia	Hindustan	West Indies
Sweden, Denmark, and Norway	China	South America
Denmark	East India Isles and Australasia	Palestine
Russia in Europe		



*Price Eight Shillings and Sixpence plain, or the Maps coloured price  
Twelve Shillings and Sixpence, handsomely bound in cloth,*

**PHILIPS' POPULAR ATLAS OF THE WORLD**, in a  
Series of FIFTY-TWO IMPERIAL QUARTO MAPS, constructed from the most recent authorities, including FIVE ANCIENT MAPS, illustrative of the Important Events in Ancient History, with a copious Consulting Index, carefully compiled from the Maps themselves, by J. H. JOHNSON.

CONTENTS.

<b>MODERN MAPS.</b>	Russia in Europe	America
Western Hemisphere	Germany	North America
Eastern Hemisphere	Austria	United States
World on Mercator's	Switzerland	Canada
Projection—Double	Spain and Portugal	Central America
Map	Italy	West Indies
Arctic Regions—	Turkey in Europe, and	South America
Double Map	Greece	
Europe	Asia	<b>ANCIENT MAPS.</b>
British Isles	Turkey in Asia	Palestine
England and Wales	Russia in Asia	Orbis Veteribus Notus
Scotland	Persia and Cabool	Orbis Romani, pars
Ireland	Hindustan	Occidentalis
France, in Provinces	China	Orbis Romani, pars
France, in Depart-	East India Isles and	Orientalis
ments	Australasia	Græcia Antiqua
Belgium	New South Wales	Table of the compa-
Holland	Tasmania, or Van	rative Heights of
Prussia	Dieman's Land	Mountains
Poland	New Zealand	Table of the compa-
Sweden, Denmark,	Africa	rative Lengths of
and Norway	Egypt and Arabia	Rivers
Denmark	Petræa	

*Just published, price Two Shillings, cloth, lettered,*

**A GRAMMAR OF THE FRENCH LANGUAGE**, containing a New Method of Conjugating the French Verb, and a Single Rule for the Solution of the Theory of the Participles. By P. Y. DE SEPRES, Teacher of the French Language in the Liverpool Mechanics' Institution.

*Also, lately published, by the same Author, price One Shilling and Sixpence, cloth, lettered,*

**AN ABRIDGMENT OF SACRED HISTORY, IN FRENCH AND ENGLISH**; designed as a Preparatory Class-book in learning the French Language.



*Just published, in Imperial folio, handsomely half-bound in morocco, gilt edges, price Three Guineas,*

# PHILIPS' NEW GENERAL ATLAS OF THE WORLD;

comprehending SEVENTY-FOUR MAPS AND CHARTS, delineating the Natural and Political Divisions of the Empires, Kingdoms, and States of the World; constructed from the best Authorities, and embracing the latest Discoveries down to the date of publication, with a copious Consulting Index.

## CONTENTS.

WORLD on Mercator's Projection  
Northern Hemisphere  
Southern Hemisphere  
Eastern Hemisphere  
Western Hemisphere  
North Horizontal Hemisphere  
South Horizontal Hemisphere

### EUROPE—

Austria  
Belgium  
British Isles  
Channel Islands, including Isle of Man and Isle of Wight  
Chart of North and Baltic Seas  
Chart of Mediterranean  
Denmark  
England  
France, in Departments  
France, in Provinces  
Germany—North  
Germany—South  
Holland  
Ireland  
Italy  
Milanese States  
Naples and Sicily  
Prussia  
Russia in Europe, including Poland  
Scotland  
Spain and Portugal

### EUROPE—continued.

Sweden and Norway  
Switzerland  
Turkey in Europe, and Greece  
Tuscany, and the States of the Church  
Venetian States

### ASIA—

Arabia, including Egypt, Abyssinia, &c.  
Australia  
China  
Corea and Islands of Japan  
East India Islands  
India—North  
India—South  
Islands in the Pacific Ocean  
New South Wales and Van Dieman's Land  
New Zealand  
Palestine  
Persia and Cabool  
Russian Empire  
Tartary  
Turkey in Asia

### AFRICA—

Egypt, Nubia, and Abyssinia

### AMERICA—

North America—  
Canada, Nova Scotia, New Brunswick, &c.  
Chart of the Atlantic Islands in the Atlantic  
Mexico and Texas

### AMERICA—continued

United States, California, &c.  
South America—  
Guiana and Brazil  
Peru, Chili, Bolivia, and La Plata  
WEST INDIES—General Map  
Antigua, Guadaloupe, &c.  
Barbadoes and St. Vincent  
Cuba, Bermuda, and Bahama  
Dominica, Martinico, &c.  
Jamaica  
St. Domingo, Porto Rico, and Virgin Isles  
St. Christopher's, Nevis, and St. Lucia  
Trinidad, Grenada, Tobago, and Curagoa

Chart of the Arctic Regions, embracing the most recent Discoveries

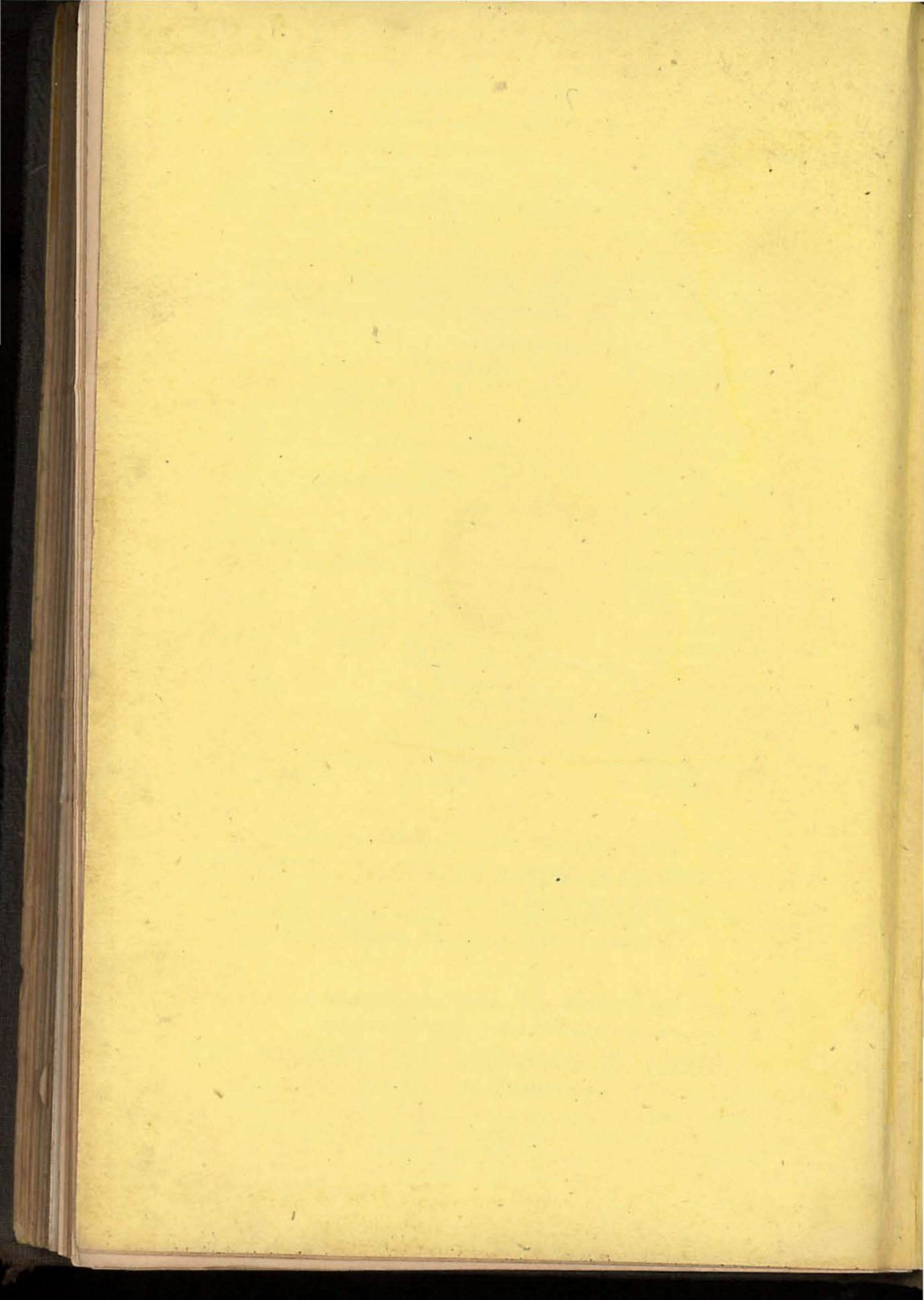
Chart of the Northwest Passage between Asia and America

Table of the Comparative Heights of Mountains

Ditto ditto Lengths of Rivers

The Maps in this Atlas are upon a very large scale, and include separate Plates of the West India Islands and the whole of the British Colonial Possessions, which cannot be had in any similar work.





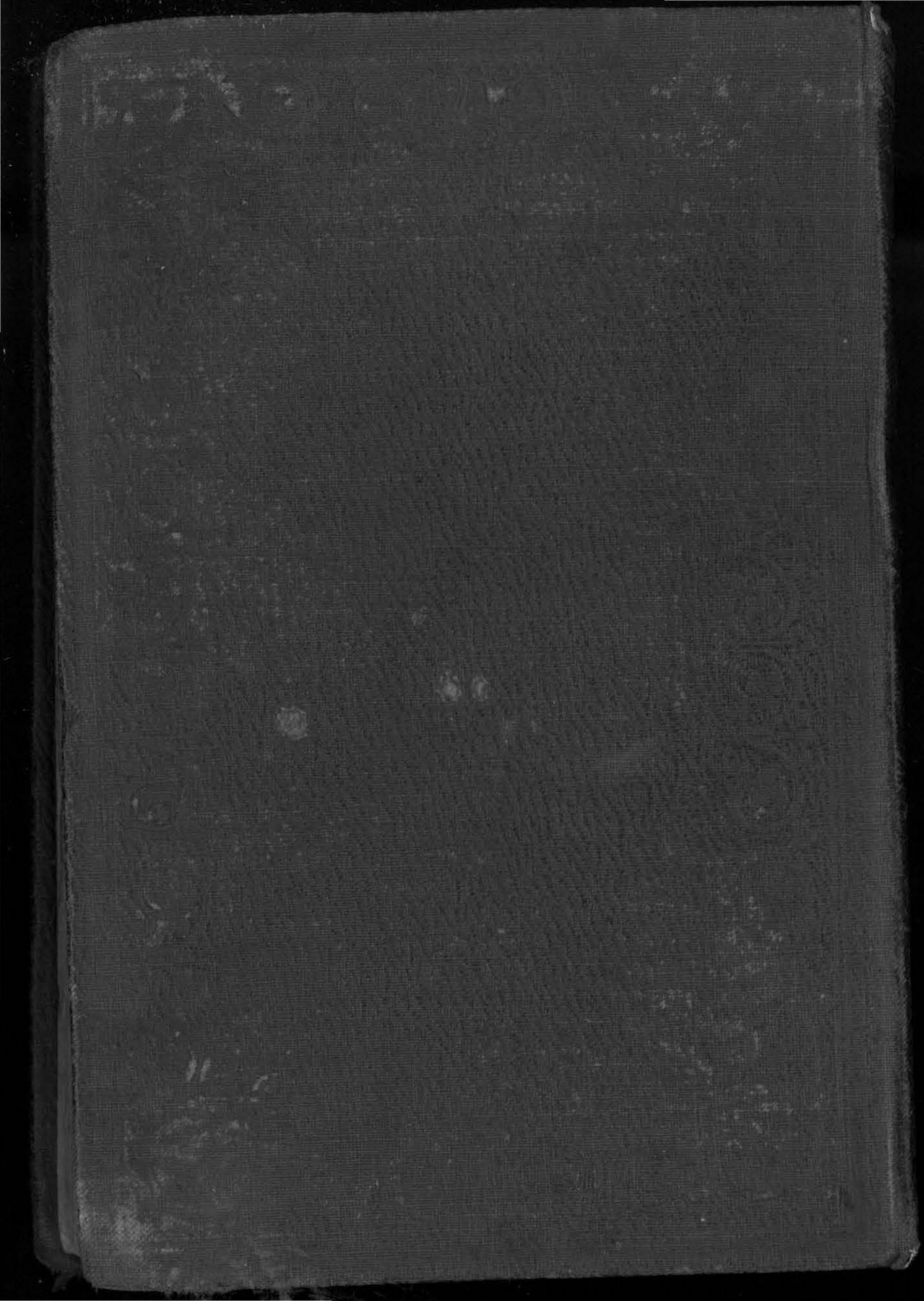






Contused or Bruised Wounds	65
Convulsion Fits (see Epilepsy)	113, 114
Cookery for the Sick, directions for	145, 147
Cooling and Refreshing Drinks	147
Cooling Ointment (No. 34)	35
Cooling Powder, or Nitre (No. 10)	30
"    "    see also Cooling Tincture (No. 5), page 28	
Cordial Tincture (Tincture of Rhubarb, No. 19)	32
Costiveness, obstinate (see Croton Oil, No. 49)	39
Coughs or Colds	127
Cranberries and Currant Jelly, use of, in sickness	147
Cream of Tartar (No. 5), use of	28
Creosote	45
Croton Oil (No. 49)	39, 40
"    use of, as an <i>external</i> application	40
Cupping Instruments, directions for the use of	53
CUTS and STABS, treatment of	54 to 61
Diarrhœa, or Looseness of the Bowels	118
Digestive Ointment (see Basilicon, No. 31)	35
DISLOCATION:—	
Of the Ankle	70
Elbow Joint	69
Fingers or Toes	67
Knee	70
Lower Jaw	70
Neck	70
Shoulder	67
Thigh	69
Wrist	69
Dover's Powder (No. 11)	30
Drawing Ointment (Basilicon, No. 31)	35
Dropsical Complaints (see Cream of Tartar, No. 5)	28
DROWNING, proper treatment in cases of	138
Drunkenness	131, 132
Dry Belly-ache	111
Dysentery, or Bloody Flux	116
Effervescing Draught (Carbonate of Soda, No. 46)	39
"    Saline Draught (see No. 56)	42
Elbow Joint, Dislocation of	69
"    Fracture of	76
Elixir of Vitriol (No. 20), use of	32
Emetics, or Vomits (Nos. 39, 58, and 64)	37, 42, 44
EPILEPSY, or Fits and Falling Sickness	113, 114







Epsom Salts (No. 9)	30
Erysipelas, or St. Anthony's Fire	122
„ arising from Wounds	123
Essence of Peppermint (No. 18)	32
Ether (No. 40)	37
Extract of Lead, Goulard's (No. 38)	36
Eye or Ear, Injuries of the	132, 133
Eyes, Inflamed	112

## FEVERS:—

Arising from Cold or Obstructed Perspiration	98
Brain Fever, or Inflammation of the Brain	108
Intermittent Fever, or Ague	98 to 101
Remittent Fever	101
Typhus Fever	106
Yellow Fever, or Black Vomit	102 to 106
Fainting	48, 49
Fever or Antimonial Powders (No. 14)	31
Fingers or Toes, Dislocation of	67
„ „ Fracture of	76
Fits and Falling Sickness (see Epilepsy)	113
Flannel, use of, in Rheumatism and Lumbago	127
Flux (see <i>Diarrhœa</i> )	118
„ Bloody (see <i>Dysentery</i> )	116
Foot or Leg, Wounds of	56
Foreskin, Complaints of the	89
Foul Smells (see also Chloride of Lime, No. 53)	23, 24

## FRACTURES:—

General Remarks	71, 73
Of the Arm	76
Collar-Bone	77
Compound Fractures	73
Elbow	76
Hand and Fingers	76
Knee-pan	77
Leg	75
Lower Jaw	78
Nose	78
Rib	78
Skull	61, 79
Thigh	74
Friar's Balsam (No. 27)	34
Frost-Bites	136
Fresh Air, importance of, in preventing infection	23
Fumigation of Ships	24



# THE SEAMAN'S MEDICAL GUIDE.

Gargles for the Mouth and Throat (see Alum, No. 54, page 41; Cooling Powder, No. 5, page 28; and No. 10, page 30; see also <i>Quinsey</i> )	109
Ginger, Powder of (No. 65)	44
Gleet, or Running (see <i>Clap</i> )	85
Goulard's Extract of Lead (No. 38)	36
Goulard Water, or Wash (see No. 38)	36
Gravel	81
Gregory's Powder (see Rhubarb, No. 4)	28
Groin, Rupture in the	80
Gum Arabic (No. 51)	40
Gum Boil	133
Gunshot Wounds	61, 62
Hammocks, the best sleeping-places	23
Hand and Arm, Wounds of	55
"    "    Fractures of	76
Hartshorn, Spirit of (No. 17)	32
Hemorrhoids (see Piles)	84
Head, Bruises of the	61, 65
"    Fever in (see Inflammation of the Brain)	108
"    Wounds of the	61, 65
Health, Preservation of	22 to 26
Heartburn (see <i>Indigestion</i> .)	
Heat of Urine (see Nos. 10 and 50)	30, 40
Hemorrhage (or Violent Bleeding)	54 to 57
Hernia, or Rupture	79
Imperial Drink (see Cream of Tartar, No. 5)	28
Indigestion (see Carbonate of Soda, No. 46; Seidlitz Powders, No. 48; Magnesia, No. 25; Bitter Tincture, No. 44; Purging Pills, No. 7).	
Infection, how to prevent the spreading of	22, 26
INFLAMMATION:—	
Of the Brain	108
Bowels	111
Eyes	112
Liver	111
Lungs	109
Throat, or Quinsey	109
Arising from Wounds	60
Broken Bones	72
Burns, or Scalds	64
Ingredients for making Bitters (No. 43)	38
Injection Powders (No. 13)	31



Injection of Tobacco (see Rupture)	80
Insects, &c. in the Eye or Ear	132
INTERMITTENT FEVER, or AGUE	98 to 101
Ipecacuanha (No. 58), a safe Emetic or Vomit	42
Itch, The	135
Jalap (No. 2)	27
Jaundice	114
Jaw, Locked (see Tetanus)	123
„ Dislocation of the	70
„ Fracture of the	78
Jelly, Restorative	146
Knee-pan, Dislocation of	70
„ Fracture of	77
Lancet, use of the	49
Laudanum (No. 22), use of	33
Lavender, Spirit of (No. 16), use of, in faintness	32
Leg, Fracture of the	75
„ Wounds of the	56
Lemonade, how to prepare	147
Lemon or Lime Juice, use of, in Scurvy	97
Letting Blood	47 to 53
Lightning, Apparent Death from	140
Limbs, Dislocated	67 to 70
„ Fractured or Broken	71 to 77
„ Frost-bitten	136
Liniment, Anodyne or Soothing	65
„ Volatile (see Spirit of Hartshorn, No. 17)	32
Linseed (No. 50)	40
Linseed-Meal Poultices (No. 59)	42
Linseed-Tea (No. 50)	40
Lint (No. 67)	45
Liver Complaint (see Jaundice)	114
„ Inflammation of the	111
Locked Jaw, or Tetanus	123
Looseness of the Bowels	118
„ „ not always a Disease	118
Lotion, or Wash, Goulard's (see No. 38)	36
Lumbago, or Pain in the Back	126
Lunar Caustic (No. 57)	42
Lungs, Inflammation of the, (or <i>Pleurisy</i> )	109
Leeches	53



Matico Leaf, use of	45
Magnesia (No. 25)	34
Medicines, use of the	27 to 45
Mercurial Ointment (No. 33)	35
"    Pills (No. 8)	29
Mortification	95, 96
"    from Burns, or Red-sores	73
"    "    Cold	136
"    "    Sloughing Wounds	95
Mulled Wine	147
Musquito Bites	134
Mustard Poultice (see No. 62)	44
Neck, Dislocation of	70
Nervous Fever (or Typhus)	106, 107
Nitre (No. 10), use of	30
Nitre, Sweet Spirit of (No. 21)	33
Nose, Bleeding at the	129
"    Fracture of the	78
Noxious Vapours, Apparent Death from	142
Oil of Turpentine (No. 15)	31
Olive Oil, or Sweet Oil (No. 26)	34
Ointment, Basilicon, or Drawing (No. 31)	35
"    Cooling (No. 34)	35
"    Mercurial (No. 33)	35
Opium Pills (No. 60)	45
Opodeldoc (No. 29) use of, in Sprains, Rheumatism, &c.	35
Pain in the Back	126
"    "    Stomach (see <i>Colic</i> )	116
Paregoric (No. 23)	33
Penis, or Yard, Diseases of the (see <i>Venereal</i> )	85 to 92
Peppermint, Essence of (No. 18)	32
Peruvian Bark (No. 1)	27
Phymosis and Paraphymosis	89, 90
PILLS	84
Pills, Mercurial, or Blue Pills (No. 8)	29
"    Opium (No. 60)	42
"    Purgative, or Antibilious (No. 7)	29
Plaster, Adhesive (No. 36)	36
"    Blistering (No. 66)	45
"    Pitch (see also <i>Fracture</i> , page 77)	127
"    Strengthening (No. 35)	36
Plague	121



Pleurisy . . . . .	109, 110
Poison . . . . .	143 to 145
POISONING by the strong Acids . . . . .	144
" by excessive use of Intoxicating Liquors . . . . .	131
" Bites of Serpents, &c. . . . .	62, 63
" Stings of Insects, &c. . . . .	134
" Laudanum or Opium . . . . .	144
" Mussels and other Fish . . . . .	145
" Tartar Emetic . . . . .	144
Poisoned Wounds, how to treat . . . . .	62, 63
Potatoes, use of, in Scurvy . . . . .	98
Poultices (see Linseed Meal, No. 59) . . . . .	42
Powders, Astringent (No. 12) . . . . .	30
" Cooling, (Nitre No. 10, and Cream of Tar- tar, No. 5) . . . . .	28, 30
" Dover's (No. 11) . . . . .	30
" Emetic (No. 64) . . . . .	44
" Fever, or Antimonial (No. 14) . . . . .	31
" Injection (No. 13) . . . . .	31
" Purgative (No. 63) . . . . .	44
" Sweating (Nos. 11, 14) . . . . .	30, 31
" Seidlitz (No. 48) . . . . .	39
Pox . . . . .	86
Preservation from Disease . . . . .	22 to 26
Proud Flesh . . . . .	60
Purgative Pills (No. 7) . . . . .	29
" Powders (No. 63) . . . . .	44
Purge, the safest (Castor Oil, No. 24) . . . . .	33
" the most powerful (Croton Oil, No. 49) . . . . .	39
Purging and Vomiting Sickness . . . . .	119
Punctured Wounds, or Stabs . . . . .	60
Quinine (No 45)—( <i>see also Bark, No. 1, page 27</i> ) . . . . .	38
Quinsey . . . . .	109
Red Precipitate (No. 30), use of, in old Ulcers . . . . .	35
Refreshing and Nourishing Drinks . . . . .	147
Restorative Jelly . . . . .	146
REMITTENT FEVER . . . . .	101
RHEUMATISM, Acute (or with Fever) . . . . .	125
" without Fever, or Chronic . . . . .	126
" in the Loins ( <i>see Lumbago</i> ) . . . . .	126
Rhubarb (No. 4) . . . . .	28
" Tincture of (No. 19), use of, in Colic, and in Flux or Diarrhoea . . . . .	32



Ribs, Fracture of the . . . . .	78
Running, or Clap (see <i>Venereal</i> ) . . . . .	85
RUPTURE, or Hernia . . . . .	79
Sago and Tapioca, how to prepare . . . . .	146
Saint Anthony's Fire (or Erysipelas) . . . . .	122
Saline Draught (see No. 56) . . . . .	42
Salt of Tartar, or Salt of Wormwood (No. 56) . . . . .	42
Scalds and Burns, treatment of . . . . .	63, 64
Scalding or Heat of Urine (see Nitre, No. 10) . . . . .	30
„ (see also Linseed, No. 50, page 40).	
SCURVY . . . . .	97
„ Danger of Bleeding in . . . . .	97
„ Use of Potatoes, Sugar, and Lemon-juice in . . . . .	97, 98
Seidlitz Powders (No. 48), use of . . . . .	39
Senna Leaves (No. 61) . . . . .	43
Shoulder, Dislocation of the . . . . .	67
Sick Cookery . . . . .	145
Skull, Fracture of the . . . . .	61, 79
Sloughing of Wounds (see <i>Mortification</i> ) . . . . .	95
Snakes and Serpents, &c., Bites of . . . . .	62, 63
Soothing Liniment, directions for making . . . . .	65
Sores or Ulcers . . . . .	93, 94
Sore Legs (see treatment of Ulcers) . . . . .	94
Sore Throat (see Inflammation of the Throat) . . . . .	109
Spine, Bruises of the . . . . .	66
Spirit of Hartshorn (No. 17), use of, in Sore Throat, &c. . . . .	32
„ Lavender (No. 16) . . . . .	32
Spirituous Liquors, proper use of . . . . .	25, 26
Splinters, &c., in Wounds, treatment of . . . . .	62
Splints, description of . . . . .	72
Sprains, treatment of . . . . .	64
Stabs, or Punctured Wounds . . . . .	60, 61
Stiff Joints (see Opodeldoc, No. 29, and Camphor Liniment, No. 42) . . . . .	35, 38
Stings of Venomous Insects (see Musquito Bites) . . . . .	134
Stomach, Bruises of the . . . . .	66
„ Inflammation of, or Dry Belly-ache . . . . .	111, 112
„ Pain in the (see Colic) . . . . .	116
Stone in the Bladder (see also <i>Catheter</i> ) . . . . .	81
Strangling or Hanging, Apparent Death from . . . . .	141
Strangury, and Suppression of Urine . . . . .	82
„ (see also <i>Catheter</i> , pages 83, 84; and Nos. 50 and 51, page 40).	
Strengthening Plaster (No. 35) . . . . .	36



Sticking Plaster (No. 36)	36
STRICTURE (see also <i>Bougie</i> )	83
Sulphur (No. 6, page 29). See also <i>Itch</i> , page	135
Sun-Stroke (see <i>Apoplexy</i> and <i>Brain Fever</i> ).	
Suture, or Stitching up of Wounds	59
Sweating, Excessive, to prevent (see Elixir of Vitriol, No. 20)	32
Sweating Powders (Nos. 11 and 14)	30, 31
Sweet Oil (No. 26)	34
Sweet Spirit of Nitre (No. 21), use of	33
Swelled Testicle	90
 Tamarind Tea, how to prepare	147
Tapioca	146
Tartaric Acid (No. 47)	39
Tartar Emetic Vomits (No. 39)	37
Testicle, Swelling of the	90
Tetanus, or Locked Jaw	123
Thigh, Dislocation of the	69
" Fracture of the	74
" Wounds in the	56
Throat, Inflammation of the	109
Tincture of Rhubarb, or Cordial Tincture (No. 19)	32
Toes, Dislocation of	67
Toothache	133
Tourniquet, or Pad, use of	55
" substitutes for	55, 56
" (see also <i>Epilepsy</i> )	113
Treatment of Wounds	54 to 63
Truss (see <i>Rupture</i> )	79
Turner's Cerate (No. 32)	35
Turpentine, Oil of (No. 15)	31
Tying a Wounded Artery	55
TYPHUS FEVER	106
 Ulcers, treatment of	93, 94
Urine, Difficulty of Passing (see also <i>Bougie</i> )	83
 Vegetables, use of, in Scurvy	98
VENEREAL DISEASE, see pages 85 to 92:—	
Buboes	87
Chancres	86
Chordee	88
Clap and Gleet	85
Pox	86, 87



*Venereal Disease, continued:—*

Phymosis and Paraphymosis	89, 90
Swelled Testicle	90
Necessity of Cleanliness	91
Venomous Animals, Bites of	62
Ventilation and Fumigation, the best means of	22 to 24
VIOLENT BLEEDING, how to stop	54 to 57
Volatile Liniment (see Spirit of Hartshorn, No. 17)	32
Vomits, see Tartar Emetic, page 37; Ipecacuanha, page 42; and Emetic Powders	44
Vomiting of Blood	128
Vomiting and Purging Sickness	119
Wash for the Eyes (see No. 52)	41
"    "    Mouth (see <i>Gargles</i> ).	
Water-Gruel, how to prepare	146
White Vitriol (No. 52), use of	41
Wormwood, Salt of, or Salt of Tartar (No. 56)	42
WOUNDS (see pages 57 to 63):—	
Artery, Wounded, how to tie	55
Clean Flesh Wounds, how to dress	58
Contused or Bruised Wounds	60
Foot or Leg, Wounds of	56
Gunshot Wounds	61
Hand and Arm	55
Head and upper part of the body	55
Inflamed Wounds	60
Poisoned Wounds	62
Sloughing Wounds (see <i>Mortification</i> )	95
Splinters, &c., in Wounds	62
Stabs, or Punctured Wounds	60
Suture, or Stitching up of Wounds	59
Thigh, Wounds in the	56
Violent Bleedings from, how to stop	54 to 57
Wrist, Dislocation of the	69
YELLOW FEVER	102 to 106
"    "    Precautions against	105
"    "    Danger of Bleeding in	103



# THE SEAMAN'S MEDICAL GUIDE.

---

## INTRODUCTORY OBSERVATIONS.

IN describing the different Medicines contained in the Chest, mention is made of the complaints in which they are useful, with the dose, and mode of using them, &c. The prescribed dose of each Medicine is calculated for an adult, or grown-up person. See *Table of Doses*, page v.

In preparing any of the medicines, great attention must be paid to *accuracy* in weighing or measuring the ingredients, according to the directions, particularly when about to use the more powerful Drugs.—In treating Diseases, the *proper quantity* is often of as much importance as the *kind* of medicine to use. With the treatment for each disease, will be found suitable directions for giving the Medicines.

Whoever has access to the Chest should carefully attend to its cleanliness, and to keeping the various bottles and jars closely stopped. It is necessary to keep the bottles, &c., closely corked and tied over, as Medicines are liable to sustain injury when exposed to the air.

Any portion of one medicine getting mixed with another, may seriously interfere with the effect of each, and with the operation of the dose. The Scales and Weights should always be put away *quite clean*, and in their proper places, after having been used.

Of the *Lancets* supplied in the Chest, at least *one* should be reserved for bleeding, and *never* used for opening boils, or for other purposes. Dangerous consequences have resulted from opening a vein with a lancet supposed to be clean, but in reality *poisoned* by having touched the matter in an abscess or sore.

There is a particular and *proper* way of wiping and drying a lancet, which will be described under the article *Bleeding*. (See pages 47 and 52.)



## ON PREVENTING INFECTIOUS DISEASES.

To prevent contagious diseases, requires the utmost vigilance and perseverance. It is sometimes difficult to ascertain the source whence they spring; but, under all circumstances, attention to cleanliness, and securing free ventilation and exposure to fresh air, are the most certain measures.

If the following rules on this subject are carefully attended to, much less sickness will occur at sea than is usually met with during long voyages. We extract them from an old work entitled *Vandeburgh's Mariner's Medical Guide*:—

“For the better information of seamen in general, I shall consider a ship being discharged in dock, and going to prepare for taking a cargo to the East or West Indies. We will suppose the ship has lately returned from one of those places with coffee or sugar, which was damaged on board, and the noxious effluvia, or air arising therefrom, remaining: if the ship be again fitted for sea, without being perfectly cleaned and well ventilated, diseases will certainly ensue, and particularly if sailing towards tropical climates. Another thing, too commonly done, is washing the *shingle* or gravel ballast, while ships are in dock; the ballast remains wet, and, of course, must decay the bottom of the ship, and not only that, but will also produce foul air, which is highly pernicious to the health of the crew, and destructive to the cargo. I would therefore particularly advise, on no account to wash the ballast in the hold of a ship, unless sufficient time can be given to have it perfectly dried before the cargo is taken in. Where fires are not permitted while ships are in dock, the best mode of airing and drying a vessel below, is by large wind-sails, which should be made of a topmast studding-sail, the head of it confined, or brought to a yard, and three parts sewn together from the foot; the part to which the yard is fixed must be hoisted up, so that the wind can blow freely through it, and the other let down in the ship's hold, or places requisite to be ventilated and dried; braces being fastened to the yard, to trim it as the wind changes. A wind-sail should be put down every hatchway of the vessel.

“The bread-room should be whitewashed previous to storing the bread, and a wind-sail frequently put in, as nothing tends more to its preservation than airing it. The habitation of the crew should be washed, but never while they are obliged to



be in it; and it ought always to be scraped, or dry-cleaned, with rubbing-stones and sand. The between-decks, and the habitation of the crew, as well as the hold, whenever it is cleared out, should be whitewashed with *quick-lime*; this may be done at little expense, and is not only a preventive against diseases, but also preserves the timber and planks. If the ship leaks or admits water, it should never remain longer than twelve hours without being pumped out, as the closeness of the well not only rots the pump, but occasions unwholesome effluvia, or bad air; indeed, if the water has been there a considerable time, the air becomes so bad, that no one can go down without risking *life*.

"The ship being well ventilated and ready, and the cargo received on board, the men are generally shipped with scarcely any other clothing than what they have on; this may have been purchased from houses or cellars at which they have lodged, where the inhabitants have perhaps been afflicted with the typhus fever, or other infectious diseases; for this reason, it would be always advisable, if possible, for the men's clothing to be well fumigated and aired previous to coming on board. The bedding and blankets should be aired, and the former composed of horse-hair—wool or flocks being more likely to harbour infection, and not so easily cleaned. It would be preferable for the men to sleep in hammocks instead of bed-places, the latter being seldom cleaned; and often, when one of the crew dies of an *infectious* disease, another occupies his place, not thinking any harm can arise."

#### PURE FRESH AIR.

The *absolute necessity* for pure fresh air for the preservation of health, might be supposed to be self-evident: nevertheless, so little was it formerly attended to, even in the British Royal Navy, that, from this cause, and from insufficient and unwholesome supplies of food, disease often made dreadful ravages.

Under improved arrangements, the standard of health in the Naval Service has become quite equal to other employments of a similar class; but on this point, and some others which have been alluded to, in the management of *Merchant Ships*, there is undoubtedly room for further improvement—to the advantage of the crew, the master, the owners, and all parties interested in the welfare of the service.

During the continuance of fine weather, no possible means



should be neglected for sending plenty of fresh air through the between-decks, and into the hold. In wet or bad weather, a clear fire, in a hanging grate (or *chauffer*), ought frequently to be shifted about between decks, lowered into the pump-well, and wherever it can be safely placed, to dry and ventilate the ship.

When the air between decks, or in the hold of the vessel, has become bad, from any of the causes which so frequently breed foul air, *Chloride of Lime* (No. 53) is more certain in its effects, and less troublesome, than the old-fashioned methods of fumigating. It has consequently come into general use. No vessel should be without it, as a preventive of infection and foul air of all kinds. It should be mixed with water, and freely sprinkled about in every part of the ship, especially where most wanted; and also thrown over the ship's timbers.

In the absence of the *really effectual* means of purifying infected places by the use of Chloride of Lime, the ship may be fumigated with tar-barrel staves, or tarred rope, burnt in iron pots or in a stove; the hatchways to be shut close and covered with tarpaulin. The blankets, bedding, and woollen clothing should be spread on lines while the fumigation is going on. As soon as the fires are extinguished, the hatchways should be uncovered, and wind-sails put down to admit a free circulation of air. Firing small pistol charges, and burning sulphur, will also have a good effect, but should only be resorted to in the absence of superior means.

#### NON-INTERCOURSE.

When a ship arrives where contagious diseases are raging, or where the climate is known to be dangerous, intercourse should be prohibited, or prevented as much as possible. The men *ought never to sleep on shore*; those necessarily employed in discharging the cargo, watering the ship, &c., should have two or three grains of Quinine, or a drachm of Peruvian Bark, mixed in a large glass of wine or weak spirits and water; and afterwards the same quantity of wine should be given on leaving the ship in the forenoon, and repeated upon their return on board before sunset. (See also *Quinine*, No. 45, page 38.) Chewing a little rhubarb-root will be of benefit; also rinsing the mouth with vinegar while at work. A cup of strong coffee, served out to the men early each morning, will be very beneficial to their health. Attention should be paid to keeping the bowels gently open, and in a healthy state.



When a contagious disease has made its appearance, the best mode of subduing it is to separate the sick from the rest of the crew, and to treat them as directed, according to the disease. Their usual clothing should be put into boiling water, as soon as possible. Have as little lumber and apparel as can be, near the sick. When the sun shines, and in dry weather, the bedding and even the body-linen of the patients should be freely exposed to the air, above deck; the deck itself sprinkled over with vinegar; the habitation of the crew well whitewashed, and kept perfectly dry; all filthy matters below deck, especially in the sick bay, be carefully removed; and active attention paid to the effectual fumigation of the ship,—for which important preservative from infectious diseases, the best means are described in the preceding page.

#### ATTENTION TO ANCHORAGE, ETC.

The anchorage should be changed to a distance from the land, if it can be done; and away from all *marshes*, as otherwise the land-breeze will be dangerous. The difference of a hundred yards in an anchorage, has frequently made a most marked alteration in the health of a ship's crew, either in increasing the number of deaths, or favouring recovery.

In hot climates, awnings over the ship and boats will be highly serviceable to the health of the crew: wind-sails should be constantly used. The men should not lie down on deck in the night-watches, as the dews are very pernicious. When in harbour in a tropical climate, the ship should be anchored where there is room for her to swing; so that, by means of springs attached to the cables, she may be warped broadside to the wind, during a sea-breeze: this will greatly contribute to health and welfare. Violent exercise under a scorching mid-day sun, should be spared as much as possible,—otherwise sickness is sure to spread among the crew.

*Drunkenness* should be strictly prohibited; as being the *principal cause* from which so many diseases arise.

Excessive and needless use of the various tropical fruits is also a common cause of serious diseases, especially among European sailors not seasoned to climate.

#### CLEANLINESS AND TEMPERANCE.

Care should be always taken that both the *ship* and the *people* are kept clean, and as dry as possible. The decks



below should be well washed once a week at least. The men should keep their bedding, hammocks, and everything about them, clean, bringing them on deck almost every day when the weather is dry; they should also change their underclothing frequently. When abroad, they should be kept on board as much as may be, and great attention paid to cleanliness. They should also be supplied with good provisions, and with a due proportion of *Vegetables*.

In northern voyages, it is a great mistake to suppose that spirituous liquors are the *best* remedies to prevent the bad consequences of cold; when their first effects are over, they leave a greater liability to chilliness. The best time to take them is *after* long exposure to cold. If a person has been in the water, or just come off a freezing night-watch, spirits are then allowable, and may be even necessary; but, *while on watch*, a fair allowance of warm tea, coffee, or broth, makes the men feel the cold so much less, that in most cases the hands very willingly take to these, in preference to grog.

#### FOOD, CLOTHING, AND TEMPERATURE.

It is less necessary to dwell on the vital importance of properly *victualling* the ship, as much improvement has taken place of late years, in the knowledge of what kind of provisions men require, to keep them in health and fit for their work, during a long voyage.

On the important article of pure fresh *Water*, we may remark that iron tanks are greatly superior to casks, for keeping it sweet and wholesome for a length of time.

With regard to the clothing of the men, a good supply of woollen garments (even in hot climates) adapted to the temperature and the weather, is most conducive to health. Flannel should *always* be worn next the skin, to guard against the sudden changes of weather, to which sailors are constantly liable. Clothing, of whatever kind, should always be kept *clean*; and wet or damp clothes cannot be too soon changed for dry ones.

In cold climates, neither the cabin nor the forecastle should be kept too warm. There is a medium temperature which is most agreeable and healthy.



## THE MEDICINES, &c.

### WITH THE PROPER DOSES OF EACH.

---

#### No. 1.—POWDER OF PERUVIAN BARK.

Before using the Bark, it will generally be advisable to clear the stomach with an emetic. (See No. 64, page 44.)

During the intermission of an Ague Fever (as soon as the Hot Fit is over), give doses of half a drachm, or even two drachms, if the stomach will bear it, every one or two hours. It may be taken with ten drops of Elixir of Vitriol (No. 20), in water, or (which is better) in wine. When the Bark has been often repeated, its effect becomes diminished; it should, therefore, if possible, be given in large quantities *at first*, so as to produce the effect speedily; if the first dose or two is not thrown up again, the dose may be increased.

Should the Bark purge, add five drops of Laudanum (No. 22) to each dose; but if it renders the patient costive, from ten to twenty grains of Rhubarb (No. 4) may be added, till two stools have been thus procured.

When the time of the hot fit approaches, and while it is on, the medicine should be discontinued.

[This Medicine was long the most valuable known to physicians in treating fevers, particularly those of the intermitting class, commonly called Agues.

It is almost superseded by the introduction of QUININE, now supplied in Medicine Chests. Quinine has all the virtues of the Bark preserved in a concentrated form, and is not liable to injury by climate. Owing to this superiority of Quinine, the Lords of the Admiralty have directed its supply instead of Bark.—See *Quinine*, No. 45, page 38.]

#### No. 2.—JALAP.

A useful and powerful purge, especially when combined with three grains of Calomel (No. 3), and two grains of Powder of Ginger (No. 65). The dose is half a drachm or less, according to the patient's age or strength.

For hot bilious constitutions, and in Fevers, a dose of Rhubarb (No. 4) and Epsom Salts (No. 9) is preferable.

Fifteen grains of Jalap, mixed with half a drachm of Cream of Tartar (No. 5) and two grains of Calomel, make the purgative powder (No. 63) directed by the Admiralty Order.



## No. 3.—CALOMEL.

This powerful medicine must be mixed up in moist sugar, treacle, or something equally thick. It should not be given in water, or any thin fluids, as it does not mix with them, or answer the purpose.

When the liver is in an unhealthy state, from one to three grains may be taken, with three grains of Rhubarb (No. 4), two or three times a week, at bed-time, and a dose of Epsom Salts on the following morning. If there is any pain or tenderness of the bowels, the Calomel should be worked off with Castor Oil, in preference to Epsom Salts.

As a *purge*, see the foregoing (Jalap, No. 2); or use the same quantity of Rhubarb (No. 4) with it, instead.

The mere "gripping" which Calomel causes in some constitutions never does harm, is of short duration, and passes away when the bowels are relieved.

Care should be taken not to check perspiration more than can be avoided, when taking Calomel or any other mercurial preparation.

Calomel is used in the Venereal Disease, in doses of one or two grains, two or three times a day, until the gums become tender and sore. If it should cause gripping or purging, add six or seven drops of Laudanum (No. 22) to each dose.

## No. 4.—RHUBARB POWDER.

One of the mildest and safest purges, particularly beneficial in slight disorders of the Stomach and Bowels. It is advantageously given in doses of one or two scruples, mixed with half a drachm of Magnesia (No. 25), and ten or twenty grains of Powder of Ginger,—forming the popular medicine, known as Dr. Gregory's Powder.

## No. 5.—CREAM OF TARTAR.

A very gentle opening medicine, in doses of half a drachm to half an ounce.

One scruple of Cream of Tartar, and as much Nitre (No. 10), dissolved in a little water, make a good Cooling Powder, to be taken twice or three times a day, in an inflammatory state of the body, and for Eruptions and Boils.

One drachm of Cream of Tartar, with half a drachm of Jalap (No. 2), is an excellent purge in dropsy.

What is called "Imperial Drink" is made by pouring two quarts of boiling water upon one ounce of Cream of Tartar,



adding a little lemon-juice, a shred or two of the peel, and as much sugar as agreeable. This is a delightful cooling drink in Fevers. Thin gruel may be used, instead of water.

#### No. 6.—SULPHUR.

A celebrated medicine for Foulness of the Skin, or Breaking out. When troubled with the Piles, a teaspoonful may be taken twice a day, in treacle, or mixed gradually in water, as if making mustard. By taking a teaspoonful each of Cream of Tartar (No. 5) and Sulphur, in about two tablespoonfuls of treacle, for nine nights at bed-time, much suffering from costiveness will be spared, and the Piles will generally be cured.

Sulphur is an effectual cure for the Itch. For this purpose, mix a tablespoonful of it with an equal quantity of lard, oil, or butter, and rub it at bed-time, for several nights, on the parts affected.

#### No. 7.—PURGATIVE OR ANTIBILIOUS PILLS.

These Pills will be found useful in accumulation of the bile; they are powerful in their effects on Jaundice, Obstruction of the Liver, and other similar complaints. They speedily unload the bowels, and remove Indigestion and Oppression of the Stomach. The dose is two or three, occasionally, at bed-time. Work them off as directed for No. 8.

#### No. 8.—MERCURIAL OR BLUE PILLS.

One of these, taken at bed-time for two or three nights, is a principal remedy in bilious complaints. A dose of Salts and Senna (see No. 61), on the following mornings, will render them more beneficial; but when there is any pain or tenderness of the bowels, Castor Oil is to be preferred.

When the Liver is inactive or loaded, take a Blue Pill at night, and two teaspoonfuls of Epsom Salts in a teacupful of water the following morning, before breakfast. Repeat this three times a week, for six or seven times. The diet should be light, drinking freely of tea, barley-water, soup, or broth; eat sparingly, if at all, of strong animal food.

These Pills are used in the Venereal Disease (see page 85). In cases of Chancre with Bubo, they are given in doses sufficient to bring on salivation, and soreness of the mouth. If they gripe or purge, an Opium Pill (No. 60) may be given at the same time.



## No. 16.—SPIRIT OF LAVENDER.

In cases of Faintness or Lowness of Spirits, a teaspoonful may be taken on a lump of sugar, or in a little water. It is also used to cover the flavour of several nauseous medicines.

## No. 17.—SPIRIT OF HARTSHORN.

A powerful cordial in Fainting, Palsy, and Sea Sickness; also in Heartburn, Flatulence, &c. Dose, a teaspoonful in a cup of water.

One tablespoonful of this Spirit, with one of Laudanum, and two of Sweet Oil, make the Volatile Liniment, much used as an *external* application in Sore Throats, Rheumatic Pains, &c. The part affected should be well rubbed with it, every six or eight hours, for about five or ten minutes at a time, or until the skin is rendered hot and begins to feel tender; and afterwards the part should be kept covered with flannel moistened with the Liniment.

When used in case of fainting, it should be held for a short time so as to cause the fumes of the Spirit to pass up the nostrils.

## No. 18.—ESSENCE OF PEPPERMINT.

Useful in cases of Cramp and Wind on the Stomach. The dose is from ten to twenty drops, on loaf sugar, and afterwards dissolved in a wineglassful or teacupful of warm water, forming Peppermint Water. It is used to prevent physic from griping, and to cover the unpleasant flavour of Castor Oil, &c.

## No. 19.—TINCTURE OF RHUBARB;

OR, CORDIAL TINCTURE.

This Tincture is useful in Cholic. The dose is two or three tablespoonfuls once or twice a day, and when the bowels are by these means opened, five drops of Laudanum (No. 22) may be taken with each dose.

In the Flux, it will be found particularly useful, if a Vomit is given before using it. When violent pains, and frequent inclination to go to stool prevail, take with it ten drops of Laudanum.

If there is danger of *inflammation*, the dose should not be repeated, on account of the spirits in the Tincture.

## No. 20.—ELIXIR OF VITRIOL.

Very useful in cases of Weakness of the Stomach, Loss of



Appetite, or profuse Sweatings, and is therefore given in small doses of five or ten drops, with the Bark or Quinine. It is also used as a preventive of the Scurvy.

When taken as a medicine by itself, the dose is from ten to thirty drops, in a large teacupful of water, every four or six hours: a *tumblerful* of water is not too much; if the Elixir is not sufficiently diluted, it will set the teeth on edge.

Without the addition of this Elixir, the Quinine will not *dissolve* in water.—See *Quinine*, No. 45, page 38.

#### No. 21.—SWEET SPIRIT OF NITRE

Has long been much esteemed. It quenches thirst; produces perspiration and a flow of urine; and expels wind from the stomach. Dose. one teaspoonful in a little barley water, three times a day.

It is also used in Strangury, Stoppage of Urine, and Clap, combined with ten or twenty drops of Laudanum.

#### No. 22.—LAUDANUM.

This is given to procure rest, and to relieve pain. Dose, from ten to forty drops, in half a teacupful of any convenient warm liquid. It is also useful in Flux, and Pain of the Bowels.

It requires great caution in using it, as it is a *poison* if given in over-doses—bringing on a stupid heavy sleep, which proves fatal if the symptoms are not stopped. The proper course to pursue where an over-dose has been taken, is noticed under the article on POISONS.—See also *Opium Pills*, No. 60, and consult the article on *Poisoning* by over-doses of opium, page 143.

#### No. 23.—PAREGORIC ELIXIR.

Useful for Coughs and Colds. The dose is from thirty drops to a teaspoonful or two, occasionally, in a little water. An *over-dose* is poisonous, especially to very young people. It should not be given to infants or children, except by medical men.

This medicine should not be taken when there is inflammation of the lungs, or much pain and difficulty in breathing.

#### No. 24.—CASTOR OIL

Is a mild, soothing, and safe purge, producing its effects without griping, and is particularly useful in Pain and Costiveness, and in Flux and Disorders of the Bowels.



When there is any doubt as to what purgative or opening medicine is the most proper, Castor Oil may be given with greater safety than any other purge.

The dose is from one to three tablespoonfuls, in a glass of Peppermint Water (see No. 18), or white wine, or floated on a cup of coffee. Some persons find it easier taken *by itself*.

The spoon for measuring the oil should be first put into hot water, and used while warm; the oil will then flow more freely from the spoon, and without waste. Warming the oil, also, will render it thinner, and less disagreeable.

#### No. 25.—MAGNESIA.

A mild opening medicine, much used in indigestion attended with heartburn. A teaspoonful or two may be taken in a cupful of water, or mixed with a tablespoonful of lemon-juice.—See also *Rhubarb*, No. 4.

After a dose of it has been taken for some hours, and if the bowels have not acted, drinking lemonade, or "Imperial" (see No. 5), will be beneficial. But to relieve acidity of the stomach, take it with a little Peppermint Water (see No. 18).

#### No. 26.—OLIVE OIL, OR SWEET OIL.

Useful in Clysters, &c.—See page 144. It may also be drunk freely in cases of Poisoning by arsenic, sublimate, or other corrosive poison. The freer the vomiting the better, till the poison is expelled.

#### No. 27.—FRIAR'S BALSAM

Is highly recommended for cleansing and healing sluggish *ragged and bruised* Wounds. The wound should be well cleaned by pouring a stream of water, cold or warm, upon it; which may be best done from the spout of a tea-kettle or jug. Dry gently, and then dress with lint or rag; wet with this balsam. Proper bandages ought to be applied at the same time, to bring the edges of the wound close together, without causing pain.

It is also used in old Coughs. The dose is from ten to sixty drops, in tea, or any agreeable liquor.

#### No. 28.—BALSAM OF CAPIVI.

A useful application to old Cuts or Sores. It is taken internally, in weakness of the Kidneys or Bladder, or difficulty in



making water: also for old Coughs. Dose, from twenty to thirty drops on lump sugar, or in weak spirits and water.

In Clap, or Running, *after the scalding is nearly gone*, a teaspoonful may be taken three or four times a day. It causes a remarkable loathing of the stomach in many constitutions, after it has been used some time.

Occasionally it proves a remedy in Piles, freeing the bowels without pain; thirty drops being taken three times a day, in sulphur and treacle, or on moist sugar.

#### No. 29.—OPODELDOC, OR SOAP LINIMENT.

This is a favourite and well-known application in Sprains, Bruises, Rheumatism, &c. It should be rubbed on the part affected every night and morning, or oftener, in quantities varying from a tea to a table spoonful.

#### No. 30.—RED PRECIPITATE.

To cause old sluggish Ulcers to heal. A little of it should be sprinkled to the sore, before applying the dressings.

#### No. 31.—BASILICON OINTMENT.

For dressing any sore that requires "drawing," such as Gun-shot Wounds, or parts torn with a nail or rusty iron. When the wound is clean, and free from proud flesh, heal it with the following Cerate (No. 32).

#### No. 32.—TURNER'S CERATE.

For any fresh Wound, or Sores fit for healing. Spread it upon linen, and dress the part with it, twice a day. It is also used in dressing blisters.

#### No. 33.—MERCURIAL OINTMENT.

For Venereal Sores; also to kill Crabs and Vermin.—See *Venereal Disease*.

#### No. 34.—COOLING OINTMENT;

OR, SIMPLE CERATE.

Proper for dressing Burns, Scalds, Inflamed Swellings, Blisters, &c. It should be spread on linen, and changed twice a day.



## No. 35.—STRENGTHENING PLASTER

May be spread upon leather or canvas, of the size required, by means of the plaster-iron, or table knife, made warm in the fire. It is used to cover any part that has been made weak by a Sprain; as the back, arms, or legs.

It is an excellent application over a Broken Rib, under the broad bandage or *belt*, which, in all such cases, should be put on as soon as possible, *round the chest*, to enable the patient to breathe with less pain. It will also sometimes relieve pains in the side.

## No. 36.—ADHESIVE PLASTER.

Proper to be applied to parts that have lost Skin, and to keep the edges of the Cuts close together. It is to be *slightly* warmed at a fire, or by holding the *back* of the strip round a jug or tumbler of hot water, before applying it. It should be applied in *narrow* strips (of about half an inch or an inch in width), leaving about the sixteenth of an inch *between* each strip,—to admit of the discharge of matter.

The other dressings may then be put on, over the plaster; and it will seldom be necessary to disturb the wound by stripping all the dressings off. In fresh and deep Cuts, it ought not to be removed for two or three days, unless there be much pain and inflammation. It is well to observe that, for purposes of cure, the lighter and less troublesome the "dressings," the better. In most cases, the best dressing is a piece of lint (or of old shirt, whether of linen or calico), soaked in cold *fresh* water.—See Index, for *Wounds*.

## No. 37.—BLUE STONE, OR BLUE VITRIOL,

Causes Chancres, sluggish Sores, and proud Flesh to heal. *Moisten it with water*, and draw it over the part once or twice a day. Another way is, to dissolve twenty grains in a wine-glassful of water, and apply it with a fine rag twice a day.

## No. 38.—GOULARD'S EXTRACT OF LEAD.

This is employed externally, as a lotion, but is unfit for *internal* use. Opening medicine should be given during the use of the lotion.

Mix *one teaspoonful* in a pint of water, and then add two tablespoonfuls of brandy or other spirit. It is used in cases of external Inflammation, caused by Burns, Bruises, or Sprains;



apply a piece of thin linen, dipped in it, over the part inflamed, and keep it constantly wet with the lotion. The inflamed part should not be covered up with bedclothes.

#### No. 39.—TARTAR EMETIC.

To produce a vomit, dissolve five grains in a teacupful of water; a tablespoonful may be taken every five or ten minutes, until it operates. It is useful at the commencement of Fever. Drinking plentifully of warm water, from time to time, will prevent too much straining of the stomach while the vomiting lasts. Plain warm water is the safest and best of all things to work off a vomit.

When given in small doses, so as to produce heart-sickness without vomiting, Tartar Emetic is useful in Rheumatism, and in Inflammations of the *Throat* and *Chest*. Dissolve two grains of the Tartar in half a pint of water, and let a tablespoonful be taken every hour, or oftener, so as to keep up the *sensation* of sickness.

For *external* use, a drachm and a half, mixed with an ounce of lard or suet, make the Ointment. The occasions on which it should be applied, are noticed in the course of the work.

#### No. 40.—ÆTHER.

An excellent medicine in Fainting Fits, and in Spasmodic Affections, attended with pain in the Stomach. A teaspoonful taken with twenty drops of Laudanum (No. 22), in a cupful of water, will generally give relief quickly.

#### No. 41.—CHAMOMILE FLOWERS.

A pint of boiling water, poured upon a handful of the Chamomile Flowers, and allowed to stand till cold, forms a very good bitter for improving the appetite, and strengthening the stomach. For this purpose, take a wineglassful of the infusion half an hour before meals.

Flannel bags, filled with these flowers, and soaked in boiling water, are useful Fomentations, retaining heat a long time.



## No. 42.—CAMPHOR.

Two drachms, dissolved in two or three tablespoonfuls of Turpentine, Sweet Oil, or strong spirits, make an excellent liniment for rubbing Sprains, Bruises, and Stiff Joints, after the active stage of inflammation has subsided.

## No 43.—INGREDIENTS FOR MAKING BITTERS.

Each parcel should be infused in two quarts of good rum, or gin, and be frequently shaken. In ten days they may be strained for use. Dose, same as the Bitter Tincture (No. 44).

## No. 44.—BITTER TINCTURE.

For strengthening the Stomach, creating an Appetite, and assisting Digestion. Two teaspoonfuls may be taken in a glass of water or wine, half an hour before meals.

## No. 45.—QUININE.

This valuable medicine has all the properties of Peruvian Bark (No. 1), and is in fact the best form in which it can be taken. The dose for adults is from one to three grains, three times a day, and in proportion for younger persons. It may be given in the form of a pill, or in treacle; but a preferable way is, dissolved in a wineglassful of water, *first* adding *five* or *ten* drops of Elixir of Vitriol (No. 20).

In cases of obstinate Ague, the doses may be increased to five grains, unless they cause headache and restlessness.

Quinine should not be given when there is any inflammation; nor be discontinued, or the dose lessened, until the patient, having missed several fits, appears free from disease.

One drachm of Elixir of Vitriol (No. 20), put into half a pint of water, one scruple of Quinine being then added and mixed, make the Quinine Mixture: Two tablespoonfuls to be taken three times a day; or, when at marshy and unhealthy stations, a wineglassful daily. (See page 24.)



## No. 46.—CARBONATE OF SODA.

Very useful for the relief of Heartburn, or Acidity of the Stomach.—Dose, half a teaspoonful three or four times a day, dissolved in a cupful of cold water. A teaspoonful of Bitter Tincture (No. 44), or a little Powdered Ginger, may be added.

Two teaspoonfuls, in a tumbler of water, with a tablespoonful of brandy, and then stirring in a teaspoonful of Tartaric Acid (No. 47), or a tablespoonful of Lemon Juice, will make an agreeable Effervescing Draught, which may be taken to settle the stomach in cases of Vomiting, Sea-Sickness, or to remove thirst caused by use of spirituous liquors, &c.

Half a teaspoonful, or less, of Carbonate of Soda, or of Salt of Tartar (No. 56), put into a pint of hard or sour ale or porter, will make it fresh and agreeable.

## No. 47.—TARTARIC ACID.

Used with Carbonate of Soda (No. 46). It is also the acid for Seidlitz Powders.

## No. 48.—SEIDLITZ POWDERS.

These powders give relief in Heartburn, Indigestion, and in Bilious Affections; if taken before breakfast, they will be found more powerful as an aperient. They are peculiarly beneficial to those residing in hot climates, or on a voyage; also after indulging too freely in spirituous liquors.

By dissolving two teaspoonfuls of Epsom Salts (No. 9), in half a tumblerful of water, and then adding the Powders, a more decided relief will be afforded, where the liver is in an unhealthy state, being inactive or overloaded.

## No. 49.—CROTON OIL.

Diseases of severe and obstinate character may occur at sea, in which, unless the bowels are speedily emptied, death will follow in a short time. In cases of obstinate Costiveness, when other medicines fail to open the bowels, Croton Oil becomes a very valuable remedy. Caution is required in administering



it, as ONE OR TWO DROPS should be quite sufficient. It may be given in half a cupful of water, or made into a pill with a little flour. The sensation of heat in the throat, often felt after taking it, is quite harmless, and soon goes off.

The great benefit derivable from one or two *drops* of the Oil, arises from the *smallness* of the dose, and its good effect, where the patient cannot or will not take doses of medicine,—as in cases of Fits, Lock-jaw, Stupor, &c. By placing over the tongue one or two drops of Croton Oil on a very little sugar, and then pouring a teaspoonful of water through the teeth or over the tongue towards the throat, while the sick person is on his back, the bowels may be quickly and effectually relieved.

It is used when life is in danger for want of the bowels being opened; but should not be given inwardly to *very* weak persons, or where the circulation of the blood is low, and the individual feeble and worn out.

As an external application, twenty drops of Croton Oil, mixed with a tablespoonful of sweet oil or lard, may be rubbed over parts where there is a deep-seated pain; as, for example, where there is heaviness and swelling over the ribs of the right side, and reason to believe the *Liver* to be affected; when there is a *Stitch* in the side or chest; and in lingering affections of the Throat. The rubbing does most good if it brings out a crop of *points* or “pimples” on the skin. When they come out, let them die away *before rubbing again*; but repeat the application from time to time, if the complaint continues.

#### No. 50.—LINSEED.

For Coughs; and Obstruction or Heat of Urine. Put a tablespoonful into a pint of water, and boil it gently for about twenty minutes; then let it stand for half an hour. Take it plain; or sweeten with sugar or honey, adding a little lemon-juice. A teacupful may be taken three or four times a day.

#### No. 51.—GUM ARABIC.

Serviceable in Coughs and Hoarseness. A tablespoonful may be dissolved in a quart of water, and about a teacupful may be taken every three or four hours. In Strangury, and in Suppression of Urine, it will give relief, and aid in bringing off the urine without pain.



## No. 52.—WHITE VITRIOL.

Six grains, dissolved in half-a-pint of water, form an excellent wash for Inflamed Eyes, after the heat, and *active* (or apparent) inflammation, have subsided. Apply it with a piece of clean linen rag.

In cases of *Poisoning*, thirty grains, dissolved in water, make an emetic which acts speedily; but it should be used *only in such cases*, unless by an experienced medical man.

## No. 53.—CHLORIDE OF LIME.

For purifying the air in any close place having a bad smell, this is of unquestionable value.

As it *destroys* the causes of infection, it is of the utmost importance to use it freely, in all offensive diseases; when sickness prevails on board; or where there is *disease in the air*.

Pour gradually one or two quarts of water to a handful of the Chloride, mixing and stirring well for a short time. Pieces of old canvas or rag, soaked in it, should be hung up, and kept wet with it; and the liquid frequently sprinkled about; at night hang up buckets containing the mixture.

## No. 54.—ALUM.

In soreness of the Mouth, Throat, or Gums, one drachm, with one drachm of nitre (No. 10), dissolved in a pint of water, forms a safe and superior gargle, which may be used every two hours, or oftener if required. The use of a gargle consists in working it about the mouth and throat (without swallowing), and rinsing them well out several times.

Lint soaked in strong alum-water, is of service in stopping bleeding from the nose.

## No. 55.—ACID OF LEMONS.

Thirty grains of this acid, dissolved in two tablespoonfuls of water, will be nearly of the same strength as lemon juice.



## No. 56.—SALT OF TARTAR.

Used with Lemon Juice, for making Saline Draughts. It is also called Salt of Wormwood.

In Fevers, after the bowels have been opened, dissolve one scruple of Salt of Tartar in half a tumblerful of water, and add one tablespoonful of Lemon Juice (see No. 55): forming the Effervescing Saline Draught. To be given three times a day.

## No. 57.—LUNAR CAUSTIC.

Used to remove warts, proud flesh, &c.; also to destroy the venereal poison in *Chancres*, before it enters the system.

Dip the point or end of the bit of Caustic into water, before touching the part; or wash the place, leaving it slightly moist, and then touch the sore with the Caustic several times.

In a few hours afterwards, if the places so touched are exposed to the action of the air, the skin becomes brown, and sometimes even black; and in a short time scales off. It is proper to mention this, to prevent any fears arising from a mere harmless change of colour, which soon passes away.

## No. 58.—IPECACUANHA.

A good and safe emetic. Twenty or thirty grains is a proper dose. It is useful at the commencement of Fevers; in Headaches arising from a foul stomach; also in Wheezing, and in Asthmatical Complaints.

It should be given in a little water; and plenty of *warm* water drunk a quarter of an hour afterwards.—On taking an emetic, the patient should be kept warm, but not stifled with too many bed-clothes. See also *Emetic Powders*, No. 64, page 44.

## No. 59.—LINSEED MEAL.

This is perhaps the best article for making Poultices.

Put a tablespoonful or two of Olive Oil (No. 26), or lard, into a warm basin, and add about a teacupful of Linseed Meal. Pour



some boiling water on it, stirring it all well together; then add more of the meal, and more hot water, stirring again so as to prevent it from being *lumpy*, until sufficient is made. When properly made, it is rather greasy, and sticks well together; the oil being *mixed* with it, prevents it from getting hard while applied. Spread it thickly on a piece of soft linen, large enough to cover the whole of the part to be poulticed. The poultice should be large (so as not to become cold or dry too soon), but not be too heavy. Apply it as warm as the patient can comfortably bear. It ought to be renewed every six or eight hours, or oftener—before it becomes sour.

#### No. 60.—OPIUM PILLS.

An Opium Pill is a proper remedy when there is much *pain*—or in case of *vomiting and purging*, even should pain not be complained of.

Opium is put in this form, as being more convenient than any other. *Each* pill contains *one grain* of opium. When half or a quarter of a grain is wanted, the pill must be divided accordingly, with a knife.

In case of Vomiting with Purging at the same time, or in succession; Cholera, severe Bowel Complaints, Flux, &c., half a grain or a grain is sometimes sufficient to stop the disease.

Opium is a valuable medicine, but requires great discretion in its use. There is reason to believe that it is sometimes used needlessly, and too often.

#### No. 61.—SENNA LEAVES.

When a purge is wanted to act promptly, this (or Castor Oil) should be preferred.

To make a "Black Draught," pour half a pint of boiling water on half an ounce of Senna, one ounce of Epsom Salts (No. 9), and a couple of pinches of Powdered Ginger: let it stand for about an hour; then strain for use. A wine-glassful may be taken every two or three hours, until it purges. When required for use quickly, slightly boiling and straining may answer; but not so well as the other mode of preparing it.

A tablespoonful of Tincture of Rhubarb (No. 19) may be added to each dose. (See also No. 8, page 29.)



## No. 62.—MUSTARD.

A tablespoonful, mixed in warm water, is a good emetic.

A Mustard Poultice is very serviceable in Yellow Fever, and in some cases of severe illness. In warm climates, ten minutes or a quarter of an hour is sufficiently long for it to remain on the skin.

The mustard should be mixed (not too thick) with water; or vinegar, and a little rum or other spirits may be added, with a tablespoonful of salt; and then spread upon linen.

Flour or oatmeal may be added, to reduce the strength of the poultice, if necessary.

## No. 63.—PURGATIVE POWDERS.

These powders, on account of the Calomel they contain, should not be taken in water, but in sugar moistened until about as thick as treacle, or in thick gruel. (See *Directions for mixing a dose of Calomel*, page 28.)

## No. 64.—EMETIC POWDERS.

The proper occasions for the use of emetics will be found mentioned with the treatment of the diseases in which they are of service. They are very beneficial in Ague, Dysentery, Pleurisy, &c.; but they are not to be used when there is any Inflammation of the *Stomach* or *Bowels*.

When Vomiting is required, take one of these Powders in a teacupful of water; about ten minutes afterwards, drink plenty of warm water, to help its operation. If it does not act in about twenty minutes, a second powder may be taken in the same manner.

Each of these Powders contains two grains of Tartrate of Antimony or Tartar Emetic, and fifteen grains of Ipecacuanha. (See also *Tartar Emetic*, No. 39, and *Ipecacuanha*, No. 58.)

## No. 65.—POWDER OF GINGER

Is an useful addition to other medicines as an aromatic --see Rhubarb, Jalap, Magnesia, and Senna. It is used as a



remedy in flatulence, indigestion, &c.; the dose is fifteen or twenty grains in water once or twice a day.

#### No. 66.—BLISTERING PLASTER, AND FLUID.

In Inflammations situated in any internal organ (as in Pleurisy, Inflammation of the Liver or Bowels, &c.), the application of a Blister will frequently be succeeded by the most satisfactory relief. A Blister may safely be applied (*after Bleeding*), over any part where there is a deep-seated pain.

When about to be used, the Plaster should only be warmed with the hand, as *heat* tends to deprive it of its good effect; therefore, in preparing a blister plaster, it should be spread with the thumb (thinly, like so much butter), on a piece of sticking-plaster, leaving half an inch of the edge clear of the Blister all round, to catch and hold it to the skin. Or spread it on leather, thin canvas, or stout paper, of the required size. Previously to its being put on, the part should be bathed or sponged with strong vinegar, made warm.

The plaster should be kept on until blisters rise on the skin. When the blisters are sufficiently risen, open them at their *lower edge*, with the *spare* lancet, or by clipping them with sharp scissors, but do not peel away the shrivelled skin; leave it where it is,—it will come off at the right time. Dress the surface with Cerate or Cooling Ointment (No. 34).

If pain and difficulty of making water arise, see "Strangury, or Suppression of Urine," page 81.

A new preparation for raising Blisters is now patronised by the Lords of the Admiralty; and, undoubtedly, it may be of advantage to have it in the Medicine Chest.

The part to be blistered having been cleaned with a handkerchief, or a piece of linen, brush it over with the liquid, and allow it to dry. The Blisters will generally rise in about six or eight hours; and may be cut, and afterwards dressed with the usual ointment (No. 34).

#### No. 67.—LINT.

For dressing Wounds.

#### No. 68.—COTTON WOOL.

A very useful application to a burn or scald. See page 64.



## SCALES, WEIGHTS, AND MEASURES.

For explanation of the Marks on the Weights, see page v.

OILED SILK.—This is useful to prevent *wet lint*, applied as a dressing for sores or wounds, from drying, a piece large enough to cover the lint being laid on, before bandaging.

BANDAGES.—In applying a bandage, considerable attention, care, and neatness are requisite, to avoid its being too slack when put on, or becoming too tight afterwards, by the limb swelling. See directions for treating Fractured Limbs, pages 73 to 79.

SPLINTS.—An illustration of their use is given in the engraving, page 76, and several excellent substitutes described at page 72.

## VACCINE LYMPH.

For the purpose of extending the facilities of Vaccination, as a means of safety against the Small Pox.

Having *scratched open*, or punctured the skin with a lancet, moisten the Vaccine matter, by separating the two glasses, and breathing upon it. Then scrape a little on the point of the lancet and put it under the skin which has been raised up, letting the point of the lancet remain under the skin for about half-a-minute.

When the operation is successful, and the party one at all liable to the infection, a pimple forms, which becomes filled with the Cow-pock matter in about eight days.

The importance of this precaution on board ship, arises from the fact that *vaccination*, so general during childhood, affords *absolute security* against Small Pox for some years to come, but *not* during the whole of a man's life.

The vaccine matter is sometimes supplied on ivory points, which are to be placed for about a minute in the slight puncture made by the lancet.

The other articles supplied in the Chest—TRUSSES, LANCETS, SYRINGES, &c., will be found mentioned on the occasions when they are serviceable.

The Chloride of Zinc, and the Enema Syringe, are accompanied by printed directions for their use.



## BLEEDING.

Owing to the liability to severe accidents and acute diseases at sea, it is necessary that there should be some one on board willing and able to perform this operation with care and skill. Calmness, judgment, and presence of mind are requisite.

The accompanying view of the *internal structure* of the parts where Bleeding is performed, will, it is believed, better impress upon the mind the importance of the whole of the following explanations and directions.

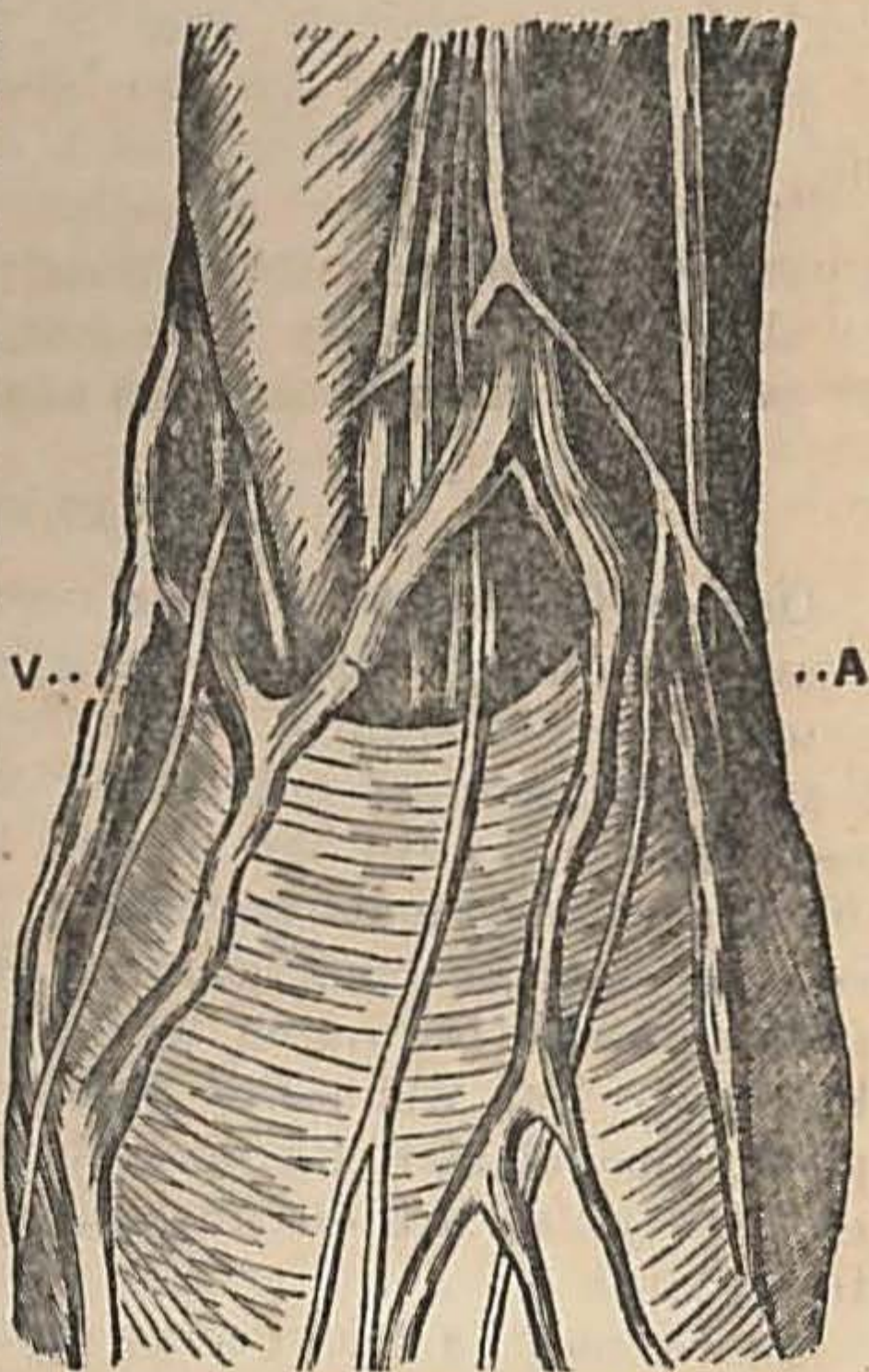
## ANATOMICAL CHART OF THE ARM,

*Shewing the parts underneath the Skin, &c.*

This Engraving exhibits the Anatomy of the Blood-vessels, &c., and the course they take at the *Bend of the Arm*.—The Skin and layers under it, if removed, would bring to view what is represented opposite.

In the middle of the engraving (on the line v....A) will be seen a small cross, x which marks the *Artery* as it takes its course. The vein is shewn a little to the left, with the lancet-cut as made in it; and the appearance of the incision illustrates the advantage which is gained by making the cut *upwards* from the part of the vein nearest to the lancet,—the Vein is not cut quite across its breadth, but the incision ends, the *point* in the lancet being *raised*, in cutting out.

FIGURE 1.



Those who are unskilled in anatomy should avoid bleeding in a vein that lies over an artery or a tendon. The *Arteries* may easily be known by their pulsation or beating. The *Tendons* feel hard or tight, like whipcord, under the finger.



It is necessary to give instructions, in the first place,—

#### WHEN NOT TO BLEED.

When fevers are on the decline, and the patient is low and sinking, the gums and teeth dark-coloured and foul,—some of the chief organs of life have become the seat of irritation or inflammation: bleeding must then be *carefully avoided*. If the stomach or belly, or the chest, be the seat of the disease, apply a Blister over the inflamed part: and to the back of the neck, or on each temple, when the Head is affected.

When a fever changes from the inflammatory to the *nervous* kind, bleeding would be *injurious*, and in all probability prove fatal. The best mode of treatment will then be, the application of *Blisters*, giving one or two grains of Quinine (No. 45) three times a day, in a glass of wine, or spirits and water.

Moreover, when sailors have been out at sea for a long time, the lancet can scarcely ever be employed with any benefit, even in severe cases; for the blood often becomes so altered and degenerated, that the system cannot bear the loss.

By carefully paying attention to the following directions, a patient may be happily restored to health, whose *Life* would in all probability have been lost, but for the relief afforded by *promptly* acting upon them *at the time when needed*.

#### WHEN TO BLEED.

One of the most probable occurrences on board ship is a heavy fall, blow, or bruise, inflicting some violent hurt, either externally or internally. It is therefore proper here to remark that Bleeding must not be performed *too soon* after such an accident,—not until the patient has got over the first shock. With a strong robust man, *when the pulse again begins to rise rapidly*, and there appears to be great danger of a serious *inflammation*, beginning with high fever, Bleeding will be of benefit. But while any symptoms of stupor or *faintness*, prostration of strength, and coldness of the extremities, with a *feeble pulse*, are observable, Bleeding would be dangerous, if not fatal.

Blood may be taken away at the *commencement* of Fevers, when there is a *strong quick pulse*, the eyes red and fiery, with great heat, thirst, and headache.

Bleeding is also a means of removing disease:—

In Swimmings, Dizziness, and Pains of the Head:



In Fits, if the spirits are hurried and overpowered, and the patient full of blood :

In Stitches, and in Pains of the Side and Breast,—particularly if *pain* is felt on drawing a full and deep breath :

In Cholic, where the pain is violent, the bowels inflamed, and no evacuation or stool easily procured :

In Coughs, if the pulse is quick and full, with an oppression at the breast, or difficulty of breathing :

In Sore Throats, when there is a strong quick pulse, and the throat is greatly swelled and inflamed.

It is sometimes recommended for the Piles; and also in Rheumatic Fevers, when the patient is of a robust, full habit of body. In Rheumatism, however, it requires judgment and skill to decide when to bleed. A wrong bleeding may cause the complaint, in shifting from the joints, to fasten with intensity on some important inward part.

It may be necessary to take away blood (and very freely) in many inflammatory complaints to which seafaring men are liable. On *referring to the treatment* of such Diseases, as described in this work, directions will be found, without carefully and *immediately* studying which, no decisive steps should be taken, lest serious mistakes occur.

#### DIRECTIONS FOR LETTING BLOOD.

The Arm is the most convenient part of the body for performing this operation. The *right* arm ought *always* to be preferred to the left. The best place for making the Cut with the Lancet, is in the fullest Vein near the bend of the elbow, inside the arm, as shewn in the engravings, pages 47, 51.

The patient should always be *sitting upright*, if possible, in preference to lying down, when about to be bled; the feeling of faintness will then come on sooner, intimating that as much blood has been taken away as the patient can safely spare, and by then *lying down*, recovery from a fainting-fit is more easily brought about.

If the *feeling* of faintness is produced, it will be sufficient in most cases, without causing an actual fainting-fit.

If, however, the object of letting blood be to bring on a decided fainting-fit, the patient should still be kept upright as long as possible,—till loss of blood causes him to faint.

Pieces of rag, folded three or four times, called *Compresses*, ought to be ready *before* letting blood, to prevent any delay or hurry, when the arm has to be bound up.



Taking the tape fillet (or bandage), fix it round the arm just above the bend of the elbow, as shewn in the opposite engraving (*Figure 2*). Turn the fillet twice round the arm,—tightening it sufficiently to make the veins swell. Then fasten it with a slip-knot, so that it may be slackened or tightened, if necessary.—But, if it be properly put on, there will be no occasion to untie it, until after the operation has been performed.

The fillet being fixed, feel for the *pulse*, in the wrist, running almost in a line with the thumb,—the hand being closed as in *Figure 2*. If you can feel the pulse, and the veins appear sufficiently distended or swelled for the operation, the fillet is properly applied; but if the pulse cannot be felt, although the veins appear full, the fillet is *too tight*.

In giving the cut with the lancet, *care* is necessary. Place the thumb of your left hand upon the vein, about an inch below the part where you intend to operate,—by this means you keep the vein steady, and prevent its *rolling* from under the lancet; with the other fingers of the same hand, grasp the arm, and hold it steady.

The lancet being opened, with the blade and the scales (or handle) at a convenient angle, take it between the thumb and forefinger of your right hand, leaving about half an inch of the blade clear of the tip of the thumb and finger; then enter it *upwards*, in a *slanting* direction, following a course similar to that of the dotted line marked upon the Vein, in the opposite engraving.—See the various engravings illustrative of this article (at page 47), on each of which the incision is plainly marked, and will be seen on examining the diagrams from (A) to (B).

The track of the *Incision* should be *slanting*, and not directly *across* the Vein. It should be a *cut*, not a stab; the point of the lancet, as soon as it has entered the Vein, is raised or tilted up, so as to clear itself out.

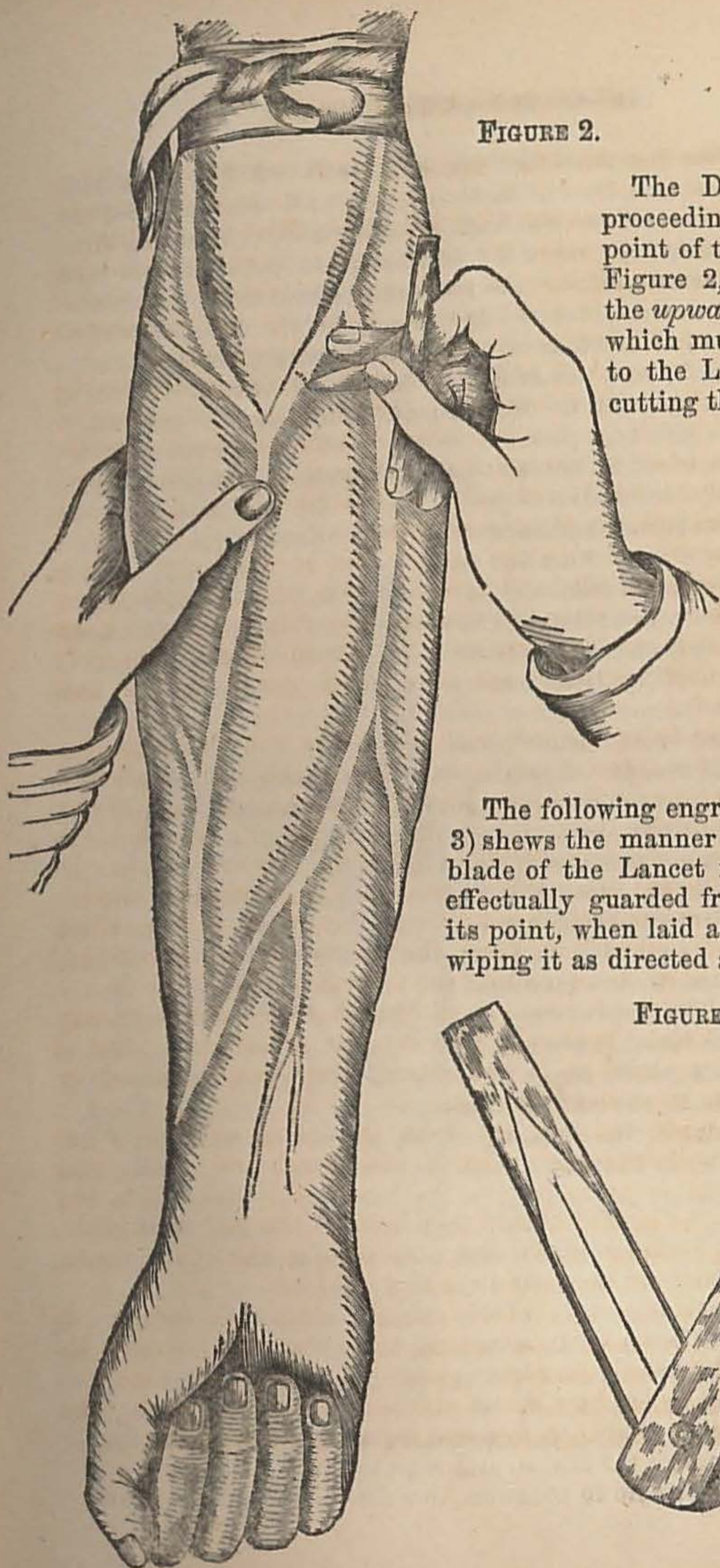
Having made the cut, lay down the lancet *carefully*; immediately withdraw the grasp of the thumb and hand, and hold a basin so as to receive the blood as it flows from the opening.—The patient should take hold of the rail of a chair, or grasp something in his hand, as soon as the cut is made, and continue to do so during the flow of blood.

Should the vein be properly opened, blood will escape. If the blood flows and then ceases, some obstacle prevents its outlet. If the vein does not appear full, *tighten* the bandage; if the pulse cannot be felt, let the bandage be loosened. But this should be seen to, before making a cut at the vein.



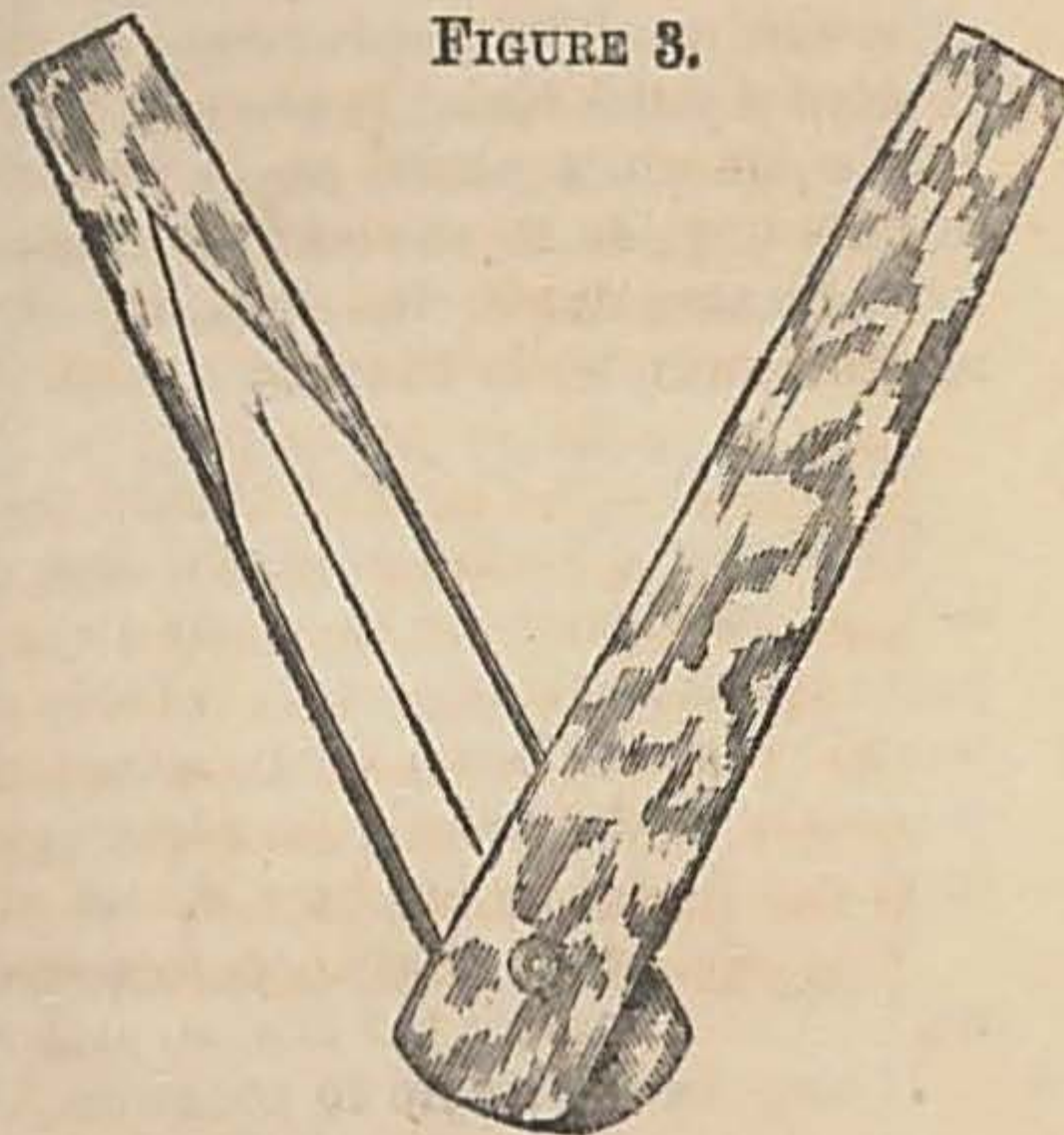
FIGURE 2.

The Dotted Line proceeding from the point of the lancet in Figure 2, only shews the *upward direction* which must be given to the Lancet, when cutting the vein.



The following engraving (Figure 3) shews the manner in which the blade of the Lancet may be most effectually guarded from injury to its point, when laid aside, or while wiping it as directed at page 52.

FIGURE 3.





It sometimes happens that the blood will not flow because the patient is already inclined to faint, and then the pulse cannot be felt: but the method of distinguishing between the two cases is this: if caused by faintness, the pulse cannot be felt at *either* wrist,—but if the stoppage is caused by the fillet being too tight, the pulse of the tied arm only will be affected.

The quantity of blood to be taken, must always be regulated by the strength, age, constitution, habits of life, and other circumstances relating to the patient. The general quantity is from half a pint to a pint.

Having let blood sufficient to cause a feeling of sickness or fainting, apply the thumb of your left hand over the cut, and take off the fillet; lower your thumb so as to bring the incision into view,—pressing on the vein sufficiently to stop the blood from rushing out. Wash the arm with a little water, and apply the Compresses *over the cut*; then bind up the arm with a yard and a half of tape. Applying the middle of it to the back of the arm above the elbow, bring round the ends, crossing them over the cut, and tie in front. (See Fig. 4.)

The blood drawn should not be hastily thrown away, but be kept for some hours, to be examined afterwards. The appearance exhibited by the blood (after standing until *quite cold*), sometimes affords a guide to the nature and *after-treatment* of the disease,—as, for example, in Pleurisy.

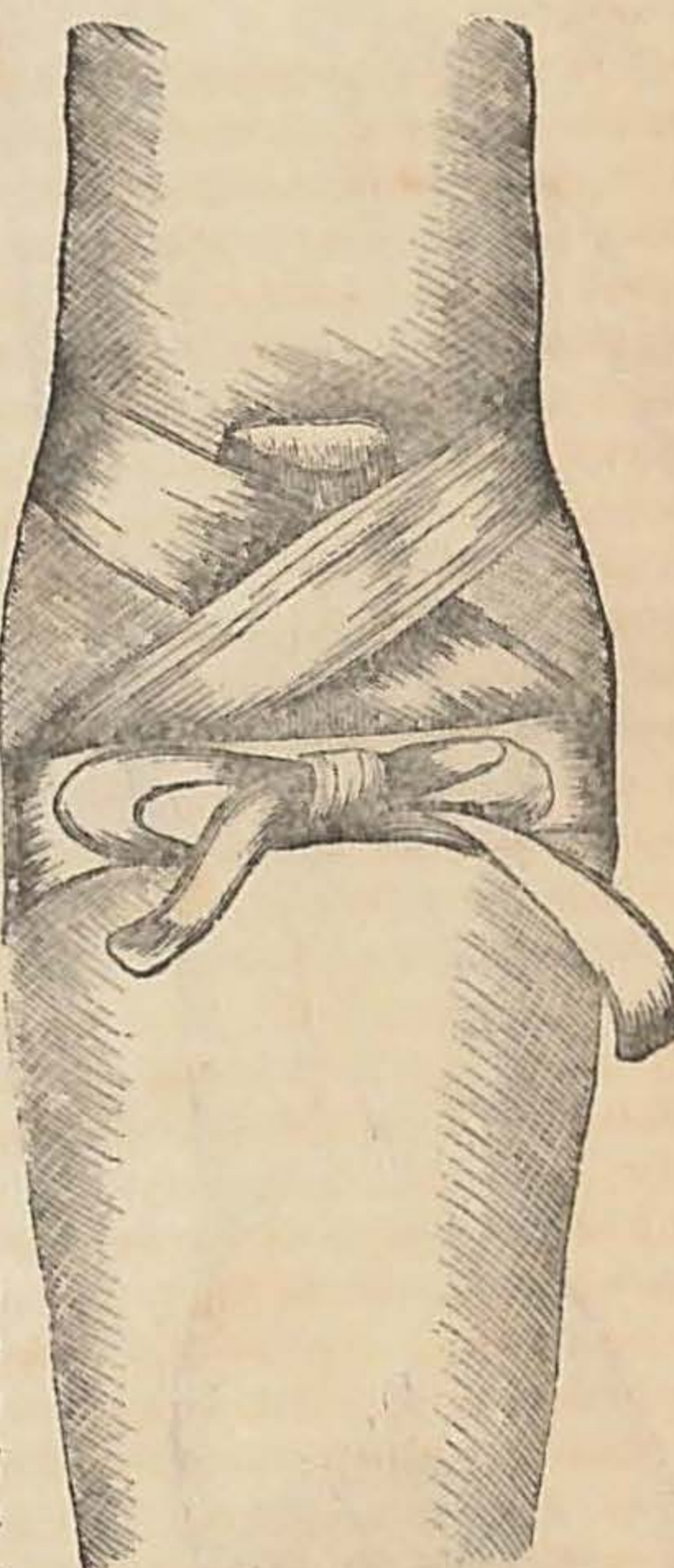
#### PRESERVATION OF THE LANCET.

To preserve the Lancet for future use, be particular *never* to let its point touch anything hard. Place one side of the blade fairly along one scale of the handle (as shewn in Figure 3), *before laying it down*.

Wipe the blade *from heel to point*, on a little dry lint or fine rag. Then change the scales, and wipe the *other* side dry.

It may be desirable to mention two other methods of draw-

FIGURE 4.





ing blood,—by LEECHES, and by CUPPING. Leeches, when obtainable, are of service in cases of Inflammation of the Bowels, Throat, and other parts. There is no difficulty in using them ; but, from the care required to keep them alive and healthy, they can scarcely be always available.

Drawing blood directly from the affected part is, however, a powerful means of cure, in some complaints.

#### CUPPING.

The instruments for Cupping are the Scarificator and the Cupping-Glass, the application of which, when once seen, is easily understood ; but dexterity requires frequent practice.

The following directions for performing the operation may be of service.

Care should be taken that the spot chosen for the operation has no Artery near the surface. This may be avoided by first feeling the part, to discover whether there is any *pulsation* under the fingers. Having made choice of the part to be cupped, wash and dry it carefully. The Cupping Apparatus being in working order, *set* the Scarificator, after regulating its lancet-points to a proper depth by turning the small screw at the side. Where the skin of the part is thin, and near the bone, the lancets of the Scarificator must be set shorter than where the skin and parts under it are soft, thick, and deep.

Place the Scarificator (without roughness) *firmly* over the part selected. On touching the spring, which acts like a trigger, the lancets will pierce the skin. The instant after, remove it, and *nimbly apply the cup* or glass *over the place*, as quick as possible, pressing down the edge of the glass with sufficient force, but no more. Withdraw the air from the inside of the glass, by *pumping* or working the handle backwards and forwards ; which will cause the soft parts to redden and rise,—and, if the different steps of the operation have been properly performed, blood will flow into the glass.

The cup, when nearly full, is to be removed by pressing the point of the finger upon the skin *outside* the edge of the glass, so as to let *air* within it. As soon as the glass is removed to be emptied and wiped clean, the assistant should apply a sponge or rag soaked in warm water, over the bleeding parts. When the glass is ready to be applied again (which cannot, as already said, be done too quickly), withdraw the sponge, wipe the surface, and instantly replace the cup, renewing the pumping as before, till a sufficiency of blood has been drawn. Then dress the part with lint, or apply sticking-plaster.



## WOUNDS.

## HOW TO STOP VIOLENT BLEEDING.

In the management of Wounds, the first thing that demands consideration is the loss of blood with which most of them are attended. When the blood is not poured out with *force*, even though the quantity should be considerable, it generally proceeds from wounded *Veins*, and may be stopped by pressing a piece of scraped lint on the wound, continuing the *pressure* with the fingers for some time; or by applying Matico Leaf (see page 45).

But when the Blood is thrown out with great force, especially if by *jerks*, and appears of a *bright* red colour, it proceeds from wounded *ARTERIES*, and requires the utmost attention.

To direct you in such a case, you may consider the Arteries as branched pipes or tubes, through which the blood is forced *from* the Heart at each of its beats. The Veins spring, in small branches, from all parts to which the arteries carry blood, and convey it back *towards* the Heart, joining with each other as they pursue their course, forming gradually larger and larger veins, until the Blood is thus conveyed into the Lungs—(which, by means of the *Air* breathed into them, renew the Blood, and make it fresh and fit to nourish the body); and it then flows from the lungs into the Heart again, to be circulated throughout the body, as before. The Heart may be compared to a sort of forcing-pump, throwing the pure blood along the arteries with such force, that we can feel the jerk or *pulse*, wherever an artery lies; and the blood, losing its impulse as it passes along, makes its way into the veins, which have no pulse or beating, and through which it returns to the Heart;—thus completing that wonderful work of the Almighty Creator,—the CIRCULATION OF THE BLOOD.

From these simple principles, the method of stopping the bleeding from a wounded artery is very plain. Pressure, or sufficient obstruction, must be quickly made by a grasp with the fingers, or by applying a tight bandage *between the Heart and the Wound of the Artery*: unless this is done in time, the patient bleeds to death.

And here it must be observed, that, in dangerous bleedings from wounds of the limbs, *there is neither time, nor any neces-*



*sity, for stripping the part to apply the bandage.* There is no doubt of lives having been lost by attempts to undress a limb, when prompt application of a handkerchief *over the clothes*, higher up than the wound, would have saved them.

### THE TOURNIQUET.

This is a surgical instrument, very useful in such cases. The mode of fixing it depends on the part to which it is applied. The *pad* should be placed on the most convenient spot between the heart and the wound: the tape passed round the limb over the pad, and carried through the screw, which must then be twisted so as to tighten the tape and press the pad until the bleeding ceases.

If a tourniquet is not at hand, some folds of linen may be rolled up into a firm pad; a handkerchief, or a strip of canvas two inches wide and about two yards long, must then be tied round the limb, over the pad, placing it between the body and the wound; tying with a tight firm knot; and then twisting it till the pressure is sufficient to stop the bleeding, by means of a small stick put in between it and the limb, over the pad.

In using a tourniquet, or similar means, be careful not to apply unnecessary force, but only sufficient for the purpose. It should be tightened as quickly as possible after it is put on, otherwise the veins will be painfully distended: a very slight pressure on a vein stops the course of the blood on its return to the heart,—while the artery, requiring more force to obstruct it, still keeps throwing blood into the veins of the limb. If kept too tight for any length of time, therefore, unpleasant consequences will occur.—When the use of a tourniquet has become necessary, it should not, however, be removed, when slackened, but continue in readiness loosely round the limb, in the event of a renewal of the bleeding.

In wounds of the Head, or of the Trunk of the body, you may stop the bleeding by pressing firmly with the *fingers* on that side of the wound the blood flows from. When at a loss to determine from what spot the blood comes, press one side after another, till you succeed. Or plug the wound with linen or cotton rag, and press downwards over it, until the bleeding is under command.

If an artery in the Hand or Arm is pouring out blood, it is to be stopped by pressure over the part, after plugging with Lint, or with Matico-leaf (see page 45); and if necessary, cast a knot in a handkerchief, placing the knot *between the elbow and*



*the armpit*, on the inside of the arm (next the body): tie it round, and tighten with a stick.

When the wound is in any part of the Thigh, knot a handkerchief firmly round the limb, between the body and the place of the wound, and twist it tight. Should the wound be so high up as to leave no room for tying a handkerchief above it, *firm pressure* must be made with the hand, on that part of the groin under where a watch lies in the fob, if the wound is in the right thigh; and on the left groin, if the wound is in the left thigh; continuing to press, till the bleeding is stopped.

The excessive bleeding which sometimes arises from serious wounds of the Leg or Foot, may be arrested by using the tourniquet (see page 55); or by making a knot in the middle of a handkerchief, placing the knot in the *ham* or hollow behind the knee, tying it tight, and twisting it sufficiently.

By these means, which it is every man's duty to become acquainted with, the most violent bleeding may be *checked*; and when the assistance of a surgeon can be had, no more should be attempted. But when a severe wound is received where no surgical aid can be obtained, the following directions will materially avail.

Having kept the "hemorrhage" or bleeding under control for ten or twelve hours, by one of the methods before described, the wound should be gently cleared of clotted blood (and whatever else may stick to it) with a sponge and cold water; then gently dry it with clean linen, and remove the pressure from the artery, so that the blood, if it flows again, may direct you to the wounded spot. Take notice of the place whence the blood springs, and then immediately renew the pressure; and, by again sponging the wound, endeavour to discover the opening in the artery.

If the blood proceeds from a wound in the *side* of an artery, the wounded part of it may be raised up by means of a large needle, so as to allow a piece of waxed *white* thread or white silk, doubled, to be passed under it, and firmly tied round the artery, on the side towards the heart, taking care to leave the ends of the thread long enough to hang an inch or more out of the wound. The same should be done on the *other* side of the opening, if the artery is large. But when an artery is divided or quite cut in two, the ends soon shrink amongst the flesh. In *large* arteries, however, the divided *upper* end generally continues to throw out dangerous quantities of blood, which can only be stopped by searching for and *drawing out* the bleeding



end of the artery with a needle, then tying it with thread, in a "reef knot,"—which is the very knot most approved of for such purposes, by the best surgeons.

When "secondary hemorrhage" (or *after-bleeding*) shews itself, the dressings should be unfastened; and on removing them, the mouth of the bleeding artery should be looked for, to be secured as before described.

This method of taking up wounded arteries is the safest and best, when it can be effected; but cases occur where (from want of knowledge) it cannot be done. Recourse must then be had to the following means:—

Having discovered the mouth of the bleeding artery (or at least *the part of the wound* in which it is situated), press a piece of lint or sponge, of a suitable size, firmly upon it. Over this lay a piece of scraped lint, dipped in Friar's Balsam (No. 27), and then some pieces of linen folded like a compress for bleeding, each fold being a little larger than that before it, till a pile is raised an inch or two above the wound, according to its size.

Be careful to place the first compress *exactly over* the bleeding point: unless this is attended to, it is of no use. Bind the whole firmly with a handkerchief or linen bandage about three inches broad, and long enough to cover the *limb* with two or three folds, overlapping it so as to extend four inches from the wound, each way.

The sufferer should be placed in bed, so that the wounded part may lie easy and undisturbed, and *not too much covered with bed-clothes*. If a large artery has been wounded, the bandage must not be removed from the upper part of the limb for three or four days; nor should the patient be left alone (for any length of time) during that period: startings of the part, and other incidents, may cause repeated bleeding, and render it necessary to tighten the bandage.

The wound may remain in this state until the dressings are loosened by the formation of matter. It must then be managed as other Wounds with loss of substance; for the treatment of which see pages 59, 60.

---

## TREATMENT OF CUTS.

In all cases of wounds, the *diet* should consist of light and nourishing food, and broth, &c. Spirits, and stimulating food, must be avoided. The bowels should be kept gently open; and as much *rest* as possible allowed.



For the sake of simplicity, we begin with those most easy of cure. Of this kind are flesh-wounds running in the direction of the limbs in which they are situated; for here we can avail ourselves of the disposition which the sides of such cuts have *to grow together*, when kept near or *touching* each other, by which the healing of a considerable one is sometimes effected in three or four days, so as to require no further care than avoiding such accidents as might tear it open before the parts unite thoroughly and become strong.

In every clean wound from a cut, where there is no bleeding artery, or where you have been able to tie it, recourse should be had to this method:—

First remove all clotted blood, dirt, &c., with a sponge, and cold or tepid (milk-warm) water. Should any foreign substance have *entered* the wound, it must be carefully removed; and the parts be gently dried with a cloth, before applying the plaster. Then bring the edges of the wound as closely together as can be done without rough handling, and keep them so by applying strips of Adhesive Plaster (No. 36) (slightly warming them as they are applied, to make them stick more readily) across the wound, about a straw's-breadth from each other. As they are put on, some one should assist, by laying his fingers on them, so as to fix them more completely. When moisture appears, it should be carefully dried.

If an artery has been tied in the wound, the ends of the thread must be brought out at that edge they are nearest to, and should be left of such a length as to reach an inch beyond it. The wound should then be closed, and strips of plaster applied as already directed. The track of the wound may now be covered with a piece of scraped lint, and, over this, another piece of lint, half an inch larger each way, and thinly spread with Cerate (No. 32). Then bind up the whole neatly, and not *too tight*, with a *thin* linen bandage reaching a hand-breadth each way from the wound. In warm weather, or when the feelings of the patient suggest, the dressings can scarcely be too cool and light.

The wound, having thus been dressed, should be kept at rest till the fourth day, when the bandage may be cautiously unfolded, softening it with a sponge and warm water, if it sticks together. The lint must be similarly removed.

If there are threads hanging out from tied arteries, they must not be pulled (unless they come away with perfect ease). Try them *gently* at each dressing after the *ninth* day, when they are generally loose, and come away without injury.



After examining the threads, any matter on the sore, or on the adjoining skin, should be gently wiped away.

The dressing may be repeated daily, and continued as long as the threads remain, and matter appears on the wound, or its edges continue tender. When these appearances cease, the same dressing may remain for a few days, when adhesion of the wound generally takes place, and the cure is completed.

This mode of healing wounds is the most satisfactory in its results, the most desirable whenever it can be used, and also serves in part as a guide to the treatment of other Wounds, presently to be considered.

Should the situation of cuts prevent the above plan (as sometimes happens in those of the throat and face), the edges may be brought together by stitching; but this should not be attempted, unless indispensable.

The *Stitching* of a Wound may be done in two ways:—

Thread a small sewing-needle with strong fine *white* thread, or white silk, doubled. Then push the needle through the flesh, at half an inch from the outside edge of the cut, till the point appears in the wound. Its lips or edges should now be brought even, and held together while the needle is put through the *other side of the cut*, and brought out at about the same distance. Having drawn the threads through, bring the edges of the wound gently together, by means of the ends of the thread, and tie them with a knot. The stitches should be half an inch or an inch apart; thus, in a cut two inches long, one stitch is sufficient. Adhesive Plaster (No. 36) may then be applied, in strips a straw's-breadth from each other, to protect the "sutures," and to prevent a strain upon them.

Another method is to pass a fine needle, or a pin, through both sides of the wound as before directed, the edges being held together while a thread is whipped under the projecting head of the pin, passing it (figure of 8 ways) over the wound and again under the point of the pin. If the wound is long, *several* needles may be introduced. They need not be removed until the fifth day; when the stitches may be cut and drawn out, or the thread untwisted and the needles withdrawn. If, however, *inflammation* and continued pain are brought on, remove the "sutures," or needles, and apply a poultice.

When there is *loss* of substance, or such a vacancy between the sides of the wound, by the shrinking of the divided flesh, as prevents their being kept together, a different method of cure than that described at page 58, must be pursued.



If a wound is ragged or bruised, or if it has been plugged to stop the flow of blood, it must be treated as follows:—

Clean wounds of this kind may be filled lightly with scraped lint; *ragged* or bruised ones with the same, dipped in Friar's Balsam (No. 27). Over this, lay a pledget of Basilicon spread upon a piece of rag, and then a little bolster of tow, binding the whole with a bandage. The part must remain in this state till the fourth day, when matter generally incrusts the dressings so as to require their removal by soaking them with a sponge and warm water. Then lay on fresh dressings, and the bandage: change them daily, wiping the edges of the sore with tow, to remove any discharge. When the cavity has become nearly filled up with flesh, or is skinning over, change the Basilicon pledget for one of Cerate, covering the parts with a single piece of lint, larger than the sore. Dress once a day, till cured.

Towards the conclusion of the cure, new flesh (or "granulations") sometimes rise above the surface of the sound skin, forming what is called *fungus*, or "proud flesh;" this may be remedied by touching it occasionally with Blue Vitriol (No. 37) slightly wetted.

When a wound is attended with a high degree of inflammation, or if its edges are hard and projecting, poultices must be applied, once or twice a day. Give the patient a cooling purge, such as Epsom Salts (No. 9): he should afterwards drink freely of tea, barley-water, or thin broth.

But when the surface of the skin around the sore looks flabby and soft, is covered with blisters, or if the sloughs are thick and ill-coloured, the discharge thin, dark, and offensive to the smell, Bark (No. 1), or Quinine (No. 45), must be given freely, as directed under those articles.

Where much violence has been done to the structure of a part (as by a bruise), or where the habit of body is faulty, the injured part is very liable to become subject to Gangrene,—which term is used to denote the *dying* condition of a part of the flesh; it is the commencement of what is called *Mortification*, which is the complete *death* of part of the body.

---

## PUNCTURES OR STABS.

Punctured wounds, or stabs with a pointed weapon, are apt to become troublesome and dangerous, particularly if of a nature



to cause extensive Abscesses, or to bring on Lock-Jaw,—as from a nail running into the foot, &c.

The most effectual treatment of a deep stab, is to *enlarge* the outward part of the wound by cutting it *longitudinally*, with a lancet or sharp knife, and thus convert the dangerous and mischievous *puncture* into a *simple cut*, which is to be dressed as directed, page 58. When this is not done, the parts should be kept quiet, and after being well bathed or fomented with warm water, they must either be poulticed or covered with two or three folds of lint, wet with hot water; changing the dressings every hour. If painful swelling takes place, relief must then be afforded by enlarging the wound.

The food should be light broth, without solids. Six grains of Jalap with two grains of Calomel may be given every night.

A deep stab which has not bled freely, often causes violent inflammation: in this case, blood must be taken from the arm.

*Contused* or bruised Wounds (from a blunt instrument) should be treated like a cut or stab. Dress with warm water and poultices; and attend to medicine and diet.

---

## GUN-SHOT WOUNDS.

Gunshot Wounds fortunately seldom occur in merchant-ships. They are difficult to manage, and liable to mortify.

Should a ball have passed into the belly or chest, there is little hope of recovery: the sufferer will often bleed to death (internally) in a few hours. The most perfect quiet is desirable; keep the head low, and supply cooling drinks, such as barley-water and gruel, with the addition of Lemon-juice, or Cream of Tartar.

When a ball has struck the head, it should be ascertained whether the bone is broken. When the skull is much injured, the patient becomes insensible, unable to speak or swallow, the pulse slow and full, the bowels confined, the breathing slow and perhaps loud. The head should be shaved, and the part covered with a linseed poultice. If he can swallow, give ten grains of Calomel (No. 3), and, two hours after, a dose of Salts (No. 9) or Jalap (No. 2). Or inject a strong Clyster, and another an hour after, if the first does not produce its effect. Avoid drawing blood from the arm, unless there is fever. Much medicine will be injurious: give merely sufficient to keep the bowels open; or administer mild Clysters. The return of the



senses, with power to move the limbs, and sickness of the stomach, are favourable signs of recovery; but death is otherwise to be apprehended.

When a ball passes through fleshy parts, without breaking a bone, the chief danger arises from its wounding some large blood-vessel or nerve.—Great care must be taken, for three weeks or a month afterwards. If the wound is attended with swelling and much pain, the patient should be bled, and freely purged. The parts may be bathed or fomented with warm water; and linseed-meal poultices applied every three or four hours. Avoid stimulants of every kind. When the inflammation has abated, the wound may be dressed with Basilicon (No. 31) spread upon lint; and the strength supported with light nourishing food.

When the end of a limb is carried away by a cannon-ball, the loss of blood is seldom alarming; for even large arteries shrink into the flesh and contract so as to retain the blood. But you must not depend on this; wounded arteries, if not tied, generally soon *break out again*, and may thus prove fatal.

Pieces of clothing, balls, splinters of wood, bone, or any kind of extraneous substance in a wound, must be immediately removed, if that can be done by *gentle means*. Where their removal would be difficult, they must be allowed to remain till they are loosened by the course of nature; or until the case comes under the superintendence of an experienced professional man.

---

## POISONED WOUNDS.

In *Poisoned Wounds* (such as the bite of a viper), the usual symptoms are swelling of the part, faintness, giddiness, and vomiting; sometimes cold sweats and convulsions, ending in death.

A tie should be put round the limb, close *above* the wound, to prevent the circulation of the blood from quickly spreading the poison. The wound should be washed with Hartshorn (No. 17) or hot Vinegar, and the part repeatedly cupped (see directions, page 53), renewing the hartshorn or vinegar fomentations each time the glasses are removed. If nothing else is at hand, touch the wound with a few drops of Elixir of Vitriol. The smarting, or slight pain, if any, must not for an instant be heeded. The part should also be rubbed with moistened Lunar



Caustic, and a linseed-meal poultice put on, changing it every three or four hours. If a surgeon can be had, the part should be cut out; but to do so well and safely, requires skill as well as determination.

The state of the constitution must be watched, and fever guarded against. If costiveness and headache, with restlessness and dry tongue, occur, give two grains of Opium (No. 60) and three grains of Calomel (No. 3), at night, with a dose of Castor Oil the next morning, until relief is obtained.

A free use of barley-water, thin gruel, &c., and a glass or two of wine daily, are advisable; the diet should consist of good nourishing food. If the patient feels faint, a teaspoonful of Spirits of Hartshorn (No. 17) may be given every three hours, in a glass of water or cold camomile tea.

The venom of rattlesnakes, &c., sometimes acts so rapidly as not to allow time for remedies. The danger is greater, when parts such as the fingers and toes are bitten.

The wound, in such cases, may be *sucked*, with great chance of success, and with *perfect safety* to the person sucking out the poison (unless his mouth or lips are *sore*)—as the poison acts, not upon the stomach, but through the circulation of the blood. Salt may be applied to the wound, and the mouth defended by rinsing it with Sweet Oil, if at hand.

---

## BURNS AND SCALDS.

When the blisters are slight, care should be taken not to break them; apply cold water as soon as possible, and then a cooling wash composed of equal parts of vinegar, water, and Oil of Turpentine, with a few drops of Goulard's Extract (No. 38); the part being kept constantly wet with this.

Or dissolve two teaspoonfuls of Carbonate of Soda (No. 46) in a cup of water: soak a piece of lint or rag in the solution, and apply it wet.

In a few days a new skin will form under the blisters (which will gradually separate of themselves). Dress the sore with Cooling Ointment (No. 34), spread upon linen.

Good soap-lather, gently laid over the burnt surface, and repeated as soon as the first coat begins to dry, or the pain to return, is a simple remedy for a common Burn. It should be done from time to time, until the soap forms a thin crust over



the burn, and completely excludes the *air* from it. One great advantage of this application, is the ease with which it can be afterwards removed, to permit the use of other remedies, if necessary.

In most cases of Burns, applying linen cloths dipped in Spirits of Turpentine will be found useful.

Cotton Wool is another useful application, laid plentifully over the whole surface of the burn, and lightly bandaged. It should be kept on until the pain and irritation have ceased; changing it once a day. Any portions of the cotton which may stick to the skin, should not be pulled away, but be allowed to come off by degrees.

In more extensive Burns or Scalds, where very large blisters are raised, or where the skin comes completely off, the blisters may be snipped open; the parts should be immediately bathed at first with *warm*, and then with *cold* water with a little spirit in it. If the arm or leg be injured, it may be placed in water until the pain abates. Should there be much redness or inflammation, apply a warm linseed or oatmeal poultice, with a teaspoonful of Sweet Oil and ten drops of Goulard's Extract (No. 38) mixed in it. This should be continued while the inflammation remains, changing it three times a day.

The patient must remain quiet, upon a low diet; allow no wine or *spirits*, except at first, and then only in small quantities (should he feel a *chilliness*, which will sometimes accompany a severe accident of this kind); and as soon as warmth is returned, they must be discontinued. If he suffers much pain, thirty or forty drops of Laudanum (No. 22) may be given, and Epsom Salts *in small doses*, three times a day, to keep the bowels in a gently relaxed state.

If the parts turn *black*, see "Mortification," page 95.

---

## SPRAINS.

Sprains, or "Strains," are often attended with worse consequences than broken bones; the reason is, they are foolishly *neglected*. When a bone is broken or dislocated, the patient is obliged to keep the limb easy; but when a joint is "only" sprained, finding that he can still make shift to move it, he converts into an obstinate malady, what might have been removed in two or three days, by keeping the part easy.

When a limb is sprained, bathe the joint freely, with hot



water, vinegar, and one or two drachms of Laudanum to a pint of water, applied by cloths kept constantly wet with it. Use the Opodeldoc embrocation (see No. 29), and wrap the part in flannel. *Rest*, and frequent rubbing with Sweet Oil, Castor Oil, or, in old cases, Oil of Turpentine, will prove of service.

Dipping a sprained limb in cold water is advised by some, provided it is done immediately, and not kept in too long at a time.

A soothing Liniment, useful in Sprains, Bruises, &c., may be made thus:—Take of Opodeldoc (No. 29) or Sweet Oil (No. 26) an ounce and a half, of Spirits of Hartshorn (No. 17) half an ounce, and of Laudanum (No. 22) a quarter of an ounce. Mix, and rub a tablespoonful frequently, on the pained part, for half an hour at a time. Then apply a light bandage.

See also *Camphor Liniment* (No. 42) and *Strengthening Plaster* (No. 63).

After a Sprain, or a Bruise, if the part continues to feel stiff or weak, pour cold water on it, every morning, for about a minute or two, and then dry-rub the whole limb briskly, with a towel. A light linen bandage, or a few folds of tape, may be worn round the joint, while it continues to feel weak.

---

## CONTUSIONS OR BRUISES.

In slight bruises, when the skin is not broken, it will be sufficient to bathe the part with hot water, and afterwards with warm vinegar, to which *a little* brandy or rum is added; keeping cloths, wet with the mixture, constantly applied. This is better than rubbing with raw spirits.

Worse consequences may follow from a heavy blow, than from some kinds of wounds. The danger does not always appear immediately; and therefore it is too often neglected.

When a bruise is severe, the patient ought to be purged, and put on a proper diet. The food should be light, and the drink, gruel or barley-water. Bathe the part with hot vinegar, and apply linseed-meal poultices, which may be put on *cold*, with much advantage, if preferred—as they frequently are.

Soothing Liniment, or Opodeldoc (No. 29), are excellent embrocations for Bruises.

HEAD.—If the skin and scalp covering the skull are the only parts affected, the symptoms are generally slight, and may



be treated as in ordinary bruises. In some constitutions, however, Erysipelas (or "*St Anthony's Fire*") and deep-seated inflammations follow blows on the head. When there is fever, accompanied by pain of the scalp, and headache, take blood from the arm till the patient feels faint. Purge with Calomel and Epsom Salts; and at night give Dover's Powder (No. 11). The diet should be low.

CHEST.—If the exterior part only of the Chest is bruised, hot fomentations, rest, and purgatives, will effect a cure; but when the interior is injured, it is a more serious accident, and, if there is much *fever*, it will be necessary to take blood from the arm. If any of the ribs are broken, see the article on Fracture of the Ribs.

STOMACH AND BOWELS.—Blows on the Stomach often cause immediate death. If the bowels are ruptured, *inward* bleeding and inflammation may take place, and become fatal. Allow the sufferer to lie quietly on his back, with his head low; give him wine and cordials every fifteen minutes, until he rallies. Keep the feet warm. Give one grain of Opium (No. 60) every third hour, till three grains have been taken.

Recovery is shewn when the pulse becomes more natural, the voice stronger, and the warmth of the body returns. The cordials must then be administered cautiously, and at longer intervals, otherwise inflammation will come on; for the treatment of which see *Inflammation of the Bowels*, page 113.

SPINE.—Severe contusion of the Spine is generally known by the loss of sensation and motion *below* the injured part. The patient may be unable to expel his urine or stools for the first few days, or they escape from him unconsciously.

*Treatment.*—Apply a large poultice along the back bone; then place the sufferer on his back, or in whatever position is most easy to himself. Give thirty grains of Jalap (No. 2) with sixty grains of Cream of Tartar (No. 5), every three hours, till a purge is obtained. Clysters will be useful, while the bowels continue costive. Draw off the urine with a Catheter.

Recovery may not take place; but while there is life there is hope, and every attention and kindness, with quiet and *good nursing*, should be paid to all sufferers from this accident. Some have recovered after having been given up.



## DISLOCATION.

This is when a Bone is out of its joint or socket. With a little contrivance and resolution, a man may render essential service in such cases, by a successful attempt at a reduction of the dislocated joint into its place, before the swelling and inflammation which otherwise must take effect, have begun.

The first point for attention, as being a general rule, is, to take notice which way the head of the bone slipped out of its socket; it must be forced back by the same way it went *out*.

Dislocated limbs, after having been reduced, must be kept quiet. If swelling and inflammation come on, treat them as in Fractures; by cold washes, or fomentations, with opening medicine, and bleeding if necessary.

When a finger is out of joint, the knuckle is started, and the joint cannot be worked; the part is also painful.

Grasp the finger, and give it a strong pull forwards, at the same time gently bending the joint, and pressing the thumb upon the end of the dislocated bone, until the knuckle slips into its natural place.

Dislocation of the Toes is of course to be similarly treated.

### DISLOCATION OF THE BONES OF THE ARM.

The ARM is commonly dislocated *downwards*, with the head of the bone in the arm-pit. The patient is unable to raise it; the limb is *longer*; and, on raising the arm, the head of the bone can be felt in the arm-pit. A *difference*, also, between the two shoulders, in such a case, can be readily perceived by handling them; the same rule applies to other dislocations.

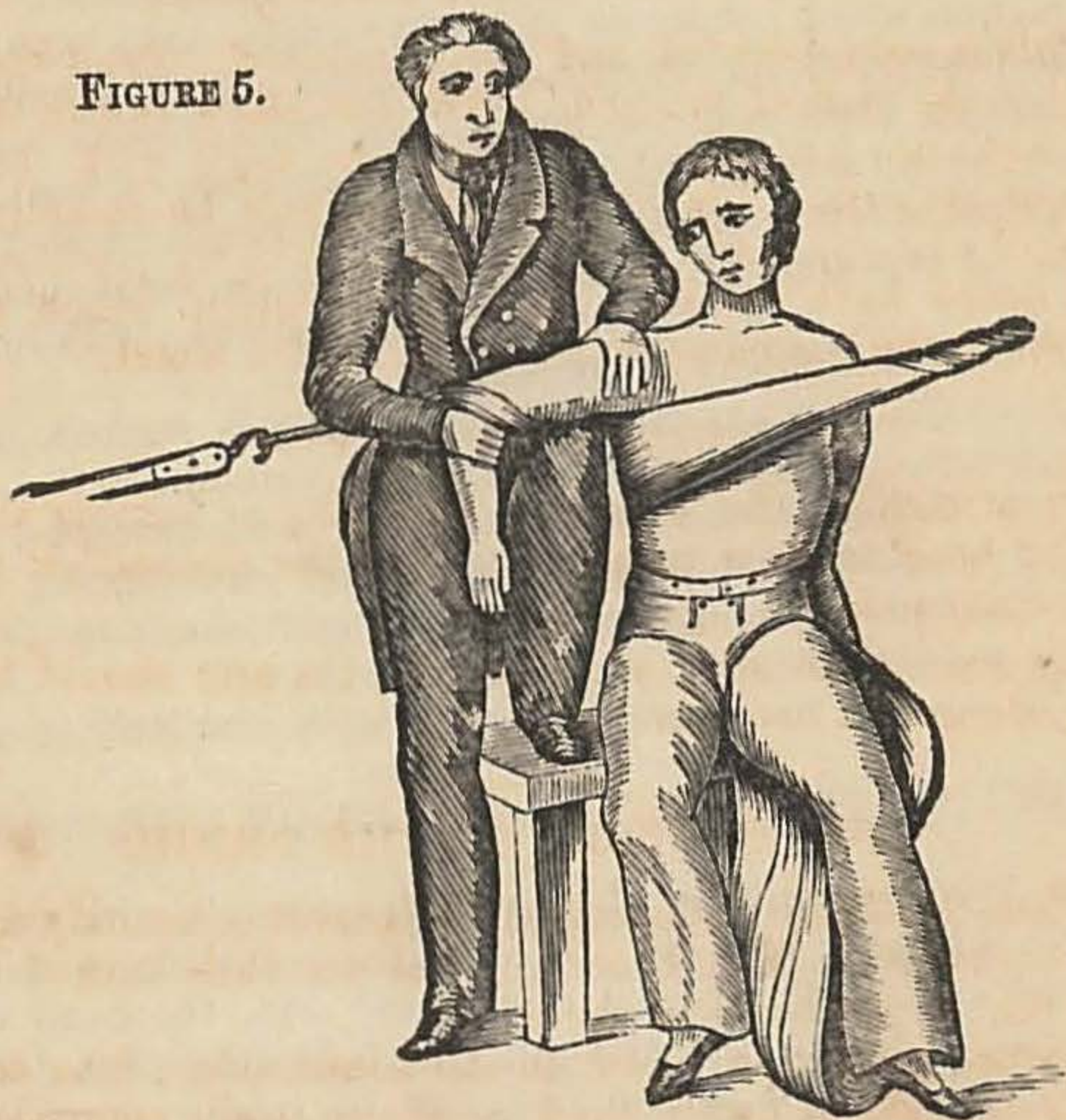
#### TREATMENT OF DISLOCATION OF THE SHOULDER.

The patient being seated, a strong towel or sheet must be put *just under the arm-pit* of the injured side, passed round his body, like a belt, and firmly held or secured on the other side. Another belt, or a strong handkerchief, is to be tied firmly round the dislocated arm, just above the elbow. The arm must then be gradually, but firmly and *steadily*, extended by one or two assistants, bearing on the slings in a direction obliquely downwards and outwards,—the body being kept immoveably fixed by some of the other men taking good hold, and bearing



upon the belt round the body, in the opposite direction. It is often necessary to have stout screws fastened into the side of the Sick Bay, or place where the patient is, to attach a small double block and tackle, for the purpose of steadying the body, and keeping the arm extended with a regular and *moderate* degree of force.

FIGURE 5.



When the extension has thus been kept up steadily for a few minutes, the patient will exhibit great signs of uneasiness, and complain of pain; this will be of advantage, especially if he feels *faint*: still keep up the extension steadily a little longer. Then, placing your knee under the arm-pit of the dislocated side (as shewn in the engraving), press the *elbow* downwards over your knee (which serves as a fulcrum),—the extension of the arm being *let go at once*, at the same moment pressing the arm a little to one side, pushing the shoulderpart (or head of the arm bone) upwards and a little outwards, and the patient being kept firm on the seat; the head of the bone will thus be replaced in its socket.



The principal points to keep in view are the *steady and regular* extension or stretching of the arm, with only *moderate* force, but without any intermission; and the extending slings being "let go" at the moment when a *vigorous effort* is made to get the bone righted.

#### DISLOCATION OF THE ELBOW JOINT.

This is soon detected, and easily reduced. Bend the elbow so that the part of the arm below the elbow (which is called the fore-arm) may almost form a right angle with the upper part of the arm. The fore-arm should now be steadily drawn forward (the upper-arm being firmly held in its position), until the bones have resumed their proper place, which may be known by the snapping sound which is then heard.

#### DISLOCATION OF THE WRIST.

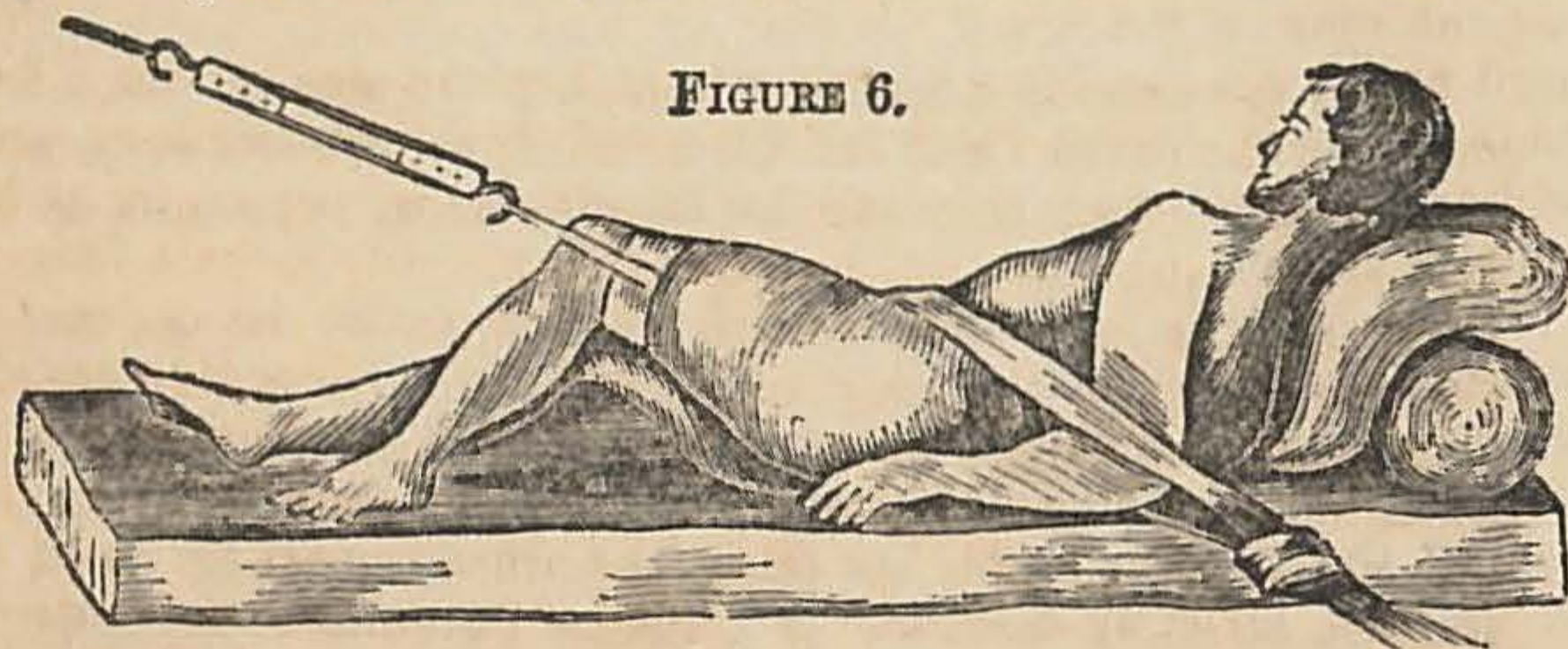
By stretching the wrist, and thrusting or turning the head of the bone into its proper position, the dislocation may be effectually reduced.

For some time after a dislocation, the arm should be kept easy, slung in a handkerchief.

#### DISLOCATION OF THE THIGH.

When the Thigh is dislocated, it is most commonly upwards and backwards. The knee and foot are then turned *in*, and that limb is *shorter* than the other.

Lay the patient on a bed, on the sound side. The trunk of the body must be firmly fixed, as shewn in the engraving, and



the knee bent. A strong towel or girth is to be applied above the knee, so as to have the thigh-bone fairly under command



by means of slings (as shewn in the engraving), and the extension of the limb commenced, gently at the first, and gradually increased, in such a manner as to draw the dislocated thigh *across the other*. In a little time, one of the assistants should gently turn the knee and foot outwards, while the other tries to raise the upper part of the thigh, and thus replace the bone.

After the reduction has been accomplished, the patient's thighs should be tied together; then arrange his berth.

---

### DISLOCATION OF THE KNEE, OR OF THE ANKLE.

Dislocations (or luxations) of the knee or ankle bones, are difficult to manage. In the absence of surgical skill, attempts should however be made, by means of extension both upwards and downwards.

If the *patella* or knee-pan be dislocated *sideways*, the limb must be firmly stretched, and strong pressure made upon the protruding edge.

If it is dislocated *upwards*, the injury is more serious, the ligaments being broken; all that can be done is to endeavour to bring down the bone by means of a long bandage round the limb, above and below the knee, crossing it in the ham (or hollow behind the knee), like a figure of 8; tighten the bandage from time to time. The patient must be kept in bed, with a splint under his leg, tied so as to keep it straight.

---

In a case of dislocation of the Lower Jaw, the nature of the injury is obvious to the sight. To replace the bone, seat the patient upon a low stool, so that an assistant may hold the head firmly against his breast. Wrap both thumbs in several folds of linen; thrust them far back into the patient's mouth, and applying the fingers to the jaw outside, press it downwards and backwards.

If the Neck be dislocated, death must speedily ensue, unless a reduction can be quickly effected,—which is not impossible. The sufferer must be laid on his back, and one of the men must take firm hold of his shoulders. Place yourself behind the sufferer, take his head in both hands, and *draw* or pull it strongly towards you, gently twisting it straight at the same time, if it be turned to one side. Success will be known by his beginning to breathe, and gradually recovering.



## FRACTURES.

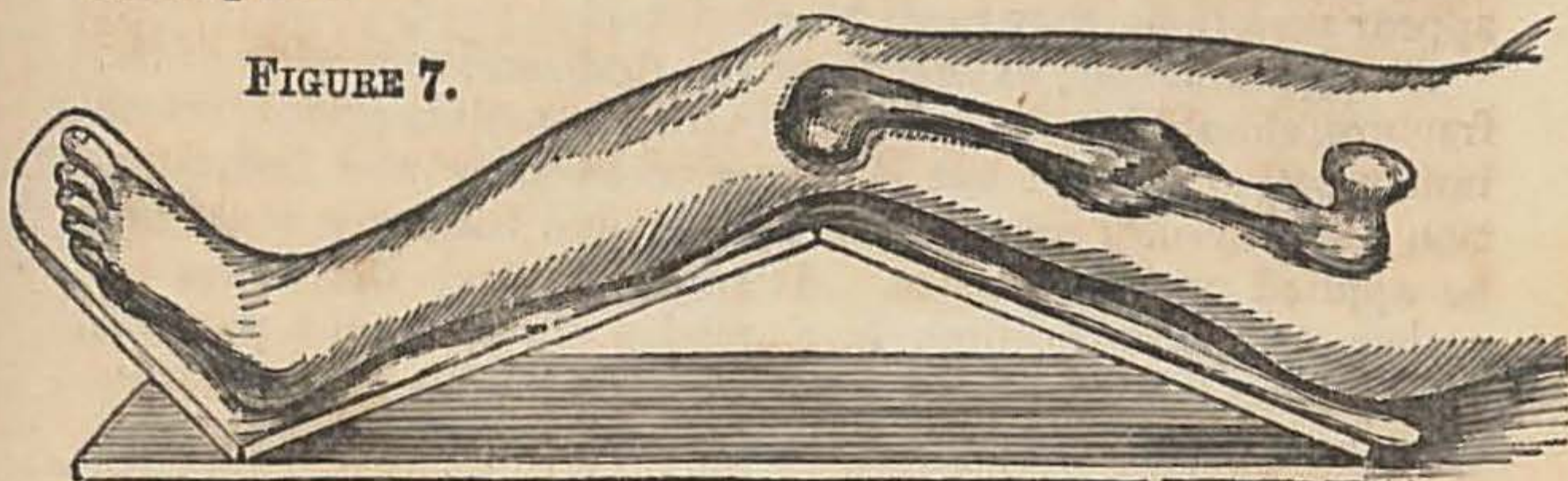
A fracture is the *breaking* of some Bone in one or more places. Fractures may be accompanied by flesh-wounds, in which case a different mode of treatment becomes requisite.

When surgical assistance cannot be obtained, the following remarks and directions may become of service.

In a case of Fracture, it is often found very difficult to keep an impatient or ignorant man *quiet* during the *time* required for the healing of broken bones.

Supposing assistance to have been rendered, the leg being "set," as it is termed, and the patient put to bed,—reference to the annexed figure (which shews the effect of a fracture of the bone of the *Thigh*), accompanied by a short explanation of *what Nature has still to do*, in order to complete the cure, will therefore be attended with considerable advantage. The bone itself is of course not seen in real life; but is represented in the figure, to give a better idea of the mischief which has taken place.

FIGURE 7.



In the first stage of the curative process, *Matter* flows out, around the broken ends of the bone. In two or three weeks (*if the leg is kept QUIET*) this *matter* becomes *gristly*, and acts upon the fracture like a belt. In another fortnight or three weeks, the *gristle* changes into a *bony substance*; but still the broken bone is not reunited,—there is a gap in the splinter, shewn like a black space in the middle of the engraving of the bone. Though, with care, a man may leave his bed at the end of six or eight weeks, and gradually put his foot to the ground without much fear of the bone *breaking again*,—time alone gradually completes the cure, and it will be months yet before the parts become "as good as ever."

In lifting up a man with a broken limb, in order to place him



in bed, the limb must be steadily *supported*. Disturb the injured part as little as possible, in taking off his clothes.

A cot is much preferable to a hammock, or a fixed berth; it is, indeed, all but indispensable in such cases at sea, owing to the rolling of the ship. A mattress is better suited for a case of fracture than a feather-bed.

As the Splints used by surgeons are seldom supplied in a Chest, some description becomes necessary. They may be made of pasteboard or millboard, or thin slips of wood, an inch and a half or two inches broad. Coopers' chips, nicely dressed off and shaped with a knife, would often make excellent substitutes. They may be lined with tow, cotton wool, or lint, and tied on with tapes. See Figure 9, page 76.

In applying Bandages, care must be taken that they *fit* sufficiently tight to answer the purpose, without being liable to interrupt the circulation, and cause or interfere with the *swelling* to which fractured limbs are particularly subject. By neglect of or want of *continued attention* to this point, the most serious suffering will be occasioned, and the unavoidable inflammation will be mischievously aggravated. Whenever the bandages appear *very tight*, they must be *slackened*.

As a general rule, extension of the limb, and reduction of the fracture, should be effected at the earliest possible period, before inflammation begins: but if excessive swelling and inflammation have *already* commenced, splints and bandages must not be applied until it abates. Attempt to place the bones together, and leave the limb in a good position for the present, with pillows tied round the limb. Fomentations and poultices must be applied. Simple dressings with cold water are often superior to any other.

When a large bone is broken, the patient's diet should be the same as in Inflammation; those, however, who have been long accustomed to live freely, should not be reduced too suddenly. It may be proper to take away blood, in those of full habit. If the parts are much bruised, and the feverish symptoms are great, the bleeding may be repeated on the following day. Keep the bowels freely opened, with Castor Oil, Epsom Salts or any mild opening medicine.

The position and general comfort of the sufferer must be attended to, day by day. He must be kept dry and *clean*, so that the parts which bear on the bedding may not be galled. In attending to the evacuations from the bowels, raise him up *as little as possible*, either for that or any other purpose.



Attention is requisite, to avoid the serious mischief which may arise from what are termed "Bed-sores," originating in pressure on certain parts of the body, during long-continued confinement to bed, and often terminating in partial mortification. The exposed parts should occasionally be relieved as much as possible from the weight of the body, by placing pillows or folded towels under the thighs and the small of the back. The shoulder-blades, the back-bone, the hips, &c., if at all sore, should be defended with strips of plaster, or even poultices, which last form a soft cushion for the parts.

The following mode of arranging the broken limb has the advantage of being peculiarly available at sea, and has the sanction of some of the most eminent surgeons of our day.

Let the carpenter prepare a piece of wood similar to a cabin floor-plank, about three inches broad, and long enough to reach from the nipple of the breast to the heel, with two holes at one end, and two notches (similar to that in a boot-jack) in the other. The patient being laid on the mattress, and the fracture reduced, this Splint, padded with a few folds of linen or calico, is to be laid on its edge, along the outer side of the broken limb; then fasten the foot and ankle to the notched extremity with a few turns of a bandage, taking care that the limb is in a natural position. Now put a folded handkerchief round the thigh, close to the groin; bring the ends through the two holes made for them, and tie them *tight*, with a slip-knot. By this means, the splint, and the whole limb, will be thrust downwards, and the requisite extension kept up during the after-treatment, by occasionally tightening the sling.

The next step is to apply a long bandage round both the limb and the splint, from the ankle upwards.

In a case of *Compound Fracture*—(that is, when the skin and flesh are lacerated down to the bones, or the bones are driven through the skin, and thus exposed to the *air*)—any loose splinters of bone are to be carefully removed; the bones to be brought together as nearly as possible, and the lips of the wound stitched, as directed at page 59. Keep the patient on low diet for some days; gently purge the bowels. For the treatment in other respects, see the article on "Wounds."

Chloride of Lime (No. 53) used as directed at page 41, may be necessary, especially if the fleshy parts of the limb have been much wounded, and matter has formed.

Surgical assistance should be procured as early as possible, as these cases are attended with great risk and danger.



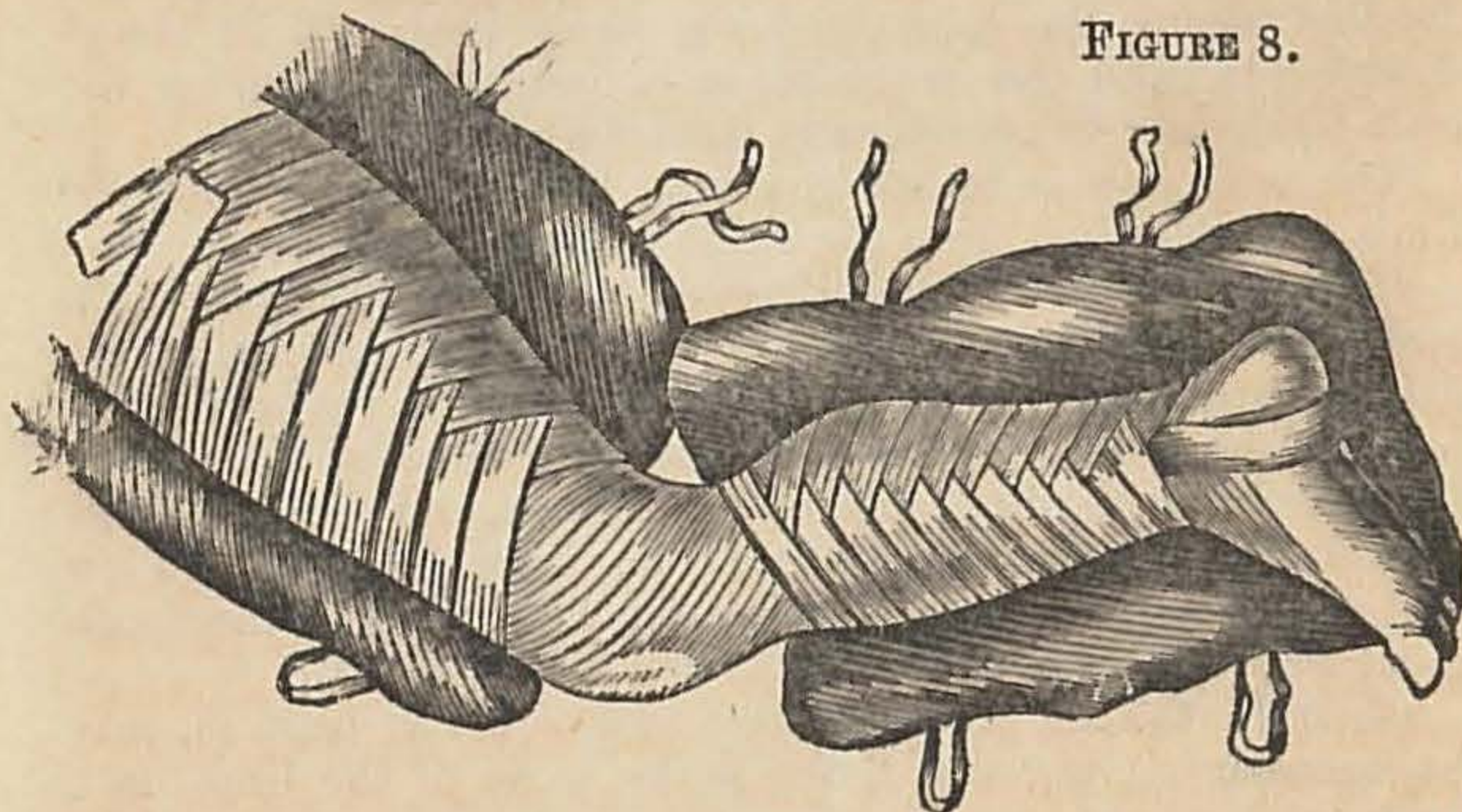
## FRACTURE OF THE THIGH.

A grating sensation is felt, the limb is shortened, the part painful, and the leg unable to support the weight of the body.

The great objects, in the treatment of this and similar fractures, are, first to bring the broken ends as near as possible together in the natural position; and, by gentle but effectual means, to *keep them so*, with the limb sufficiently extended; watching also over the state of the constitution.

One assistant is to grasp the limb round the groin, and hold it steady, whilst another firmly holds the limb above the knee, and gently but firmly extends the thigh; the ends of the bone will thus be *reduced* or brought together. Apply linen wet with cold water. In placing the Splints, let one go on the outside from the hip-joint down to the knee, and the other on the inside of the thigh, to a little below the knee. Apply a long calico bandage several times round the limb; direct the patient to lie a little on the fractured side, with the knee rather bent; he will find out the easiest position. The limb should be comfortably supported by pillows, one under the thigh, and a thicker one under the leg, each pillow being lightly tied round the limb with *two* tapes, doubled. The arrangement of the bandages and the pillows is represented (before tying) in the annexed engraving, as in a case when the thigh and the leg

FIGURE 8.



are *both* broken, which may possibly happen, in a fall from a considerable height.



## FRACTURE OF THE LEG.

The symptoms resemble those in the last case; the management is therefore similar. The Splints are to have a hole in each, to admit the projecting bone of the ankle. In five or six days, if the patient continue easy, remove the covering; but should he at any time complain of much pain, the bandages should be removed, to ascertain if the bones are properly placed.

See that the leg is brought to the same length as the other; this can be ascertained by placing them together,—noticing, when the patient is “lying fair,” that the heels, and both of the knees, correspond. If the one leg is shorter than the other, and the fracture be allowed to heal, so badly set, the patient will *limp*, for life.

The limb, when set and bandaged, may be placed with the knee bent and supported by means of a jointed board, as shewn at figure 7 (page 71); the patient lying on his back. Or, the leg may be laid on its *outside*, and supported by pillows.

Where a *bent* position is preferred, with the limb *on its side*, the treatment has been already described, at page 74.

When it is intended that the leg shall lie *straight*, apply one splint on the outside, another on the inside of the leg. In doing so, take care that the outside splint is long enough to reach completely from the knee to the toes. Padding must be inserted between the leg and the splints: then, outside of all, the limb must be supported in its position by junks; and a foot-board, which, to prevent rolling, is fastened by four strings to the ties securing the splints.

Attend carefully to the *heel*, which should have tow or something soft placed under it. A bad or troublesome sore or gangrene is otherwise likely to form, from the pressure on the heel.

When the first effects of the contusion and laceration generally attending a broken leg have subsided,—all chance of inflammation, and consequent further swelling, being removed, and the fragments have become somewhat *fixed*,—the patient may be allowed to leave his bed, after taking the following precautions:—Wrap the leg well round, from the toes to the knee, with many turns of a bandage (as shewn at Figure 8). This should be well wetted with thick paste, gum, or glue; when dry, it forms a stout case, fitting the leg accurately.

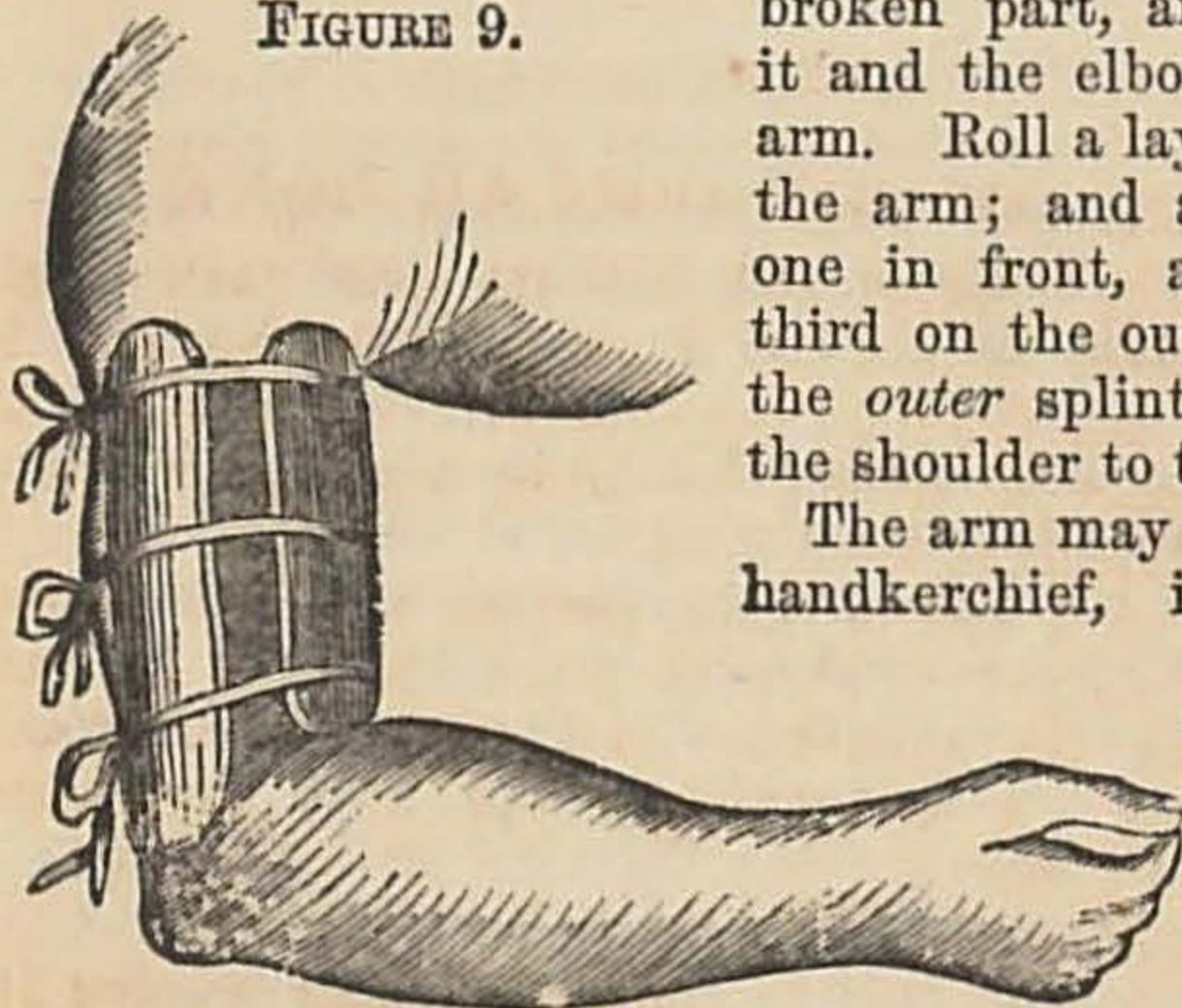


## FRACTURE OF THE BONE OF THE ARM ABOVE THE ELBOW.

The patient complains of pain in the part, and cannot raise the limb; if the arm be gently moved, by placing one hand upon the elbow, and the other upon the shoulder, a grating will be felt, and a noise heard, which is called *crepitation*.

To set the bones, bend the elbow, and raise the arm. One person is to grasp the arm between the shoulder and the

FIGURE 9.



broken part, and another betwixt it and the elbow: then extend the arm. Roll a layer of wet rag round the arm; and apply three splints, one in front, another behind, the third on the outer side of the arm; the *outer* splint should reach from the shoulder to the elbow.

The arm may then be slung in a handkerchief, in such a manner as to support the wrist more than the elbow.

## FRACTURES OF THE FORE-ARM, AND THE HAND.

Either, or *both*, of the bones which strengthen this part of the Arm, may be broken. The management is similar to the previous fracture. Apply two splints, one on the inside, the other on the outside of the arm; taking care that the thumb and the palm of the hand are kept in a straight line with the breast. Let the splints come nearly to the ends of the fingers.

The fractured bones of the Hand, when reduced, may be preserved in their natural position by means of a thick pad, well fitted to the palm of the hand; then overlap a narrow bandage, beginning at the wrist and extending to the fingers. When the Fingers are broken, the fractured bone is to be set, and supported in its place with small splints; over which wrap several turns of a strip of adhesive plaster, or wet tape.

In fracture of the Elbow, the piece of bone will be found



drawn up. It is to be replaced and confined by a "figure of 8" bandage, see Figure 4 (page 52), as directed for dislocation of the knee *upwards* (page 70). The arm should be kept nearly straight, by means of a strong splint, reaching nearly to the hand and the shoulder, and bound on the inside of the arm.

When the knee-pan is broken, the upper portion of the bone is usually found to be drawn up several inches among the muscles of the thigh. The treatment is similar to that described at page 70; but there must be no *hasty attempts*.

### FRACTURE OF THE COLLAR BONE.

When this bone is broken, although the arm itself is all right, yet the sufferer cannot lift it up. When the arm is moved by another, the fracture becomes evident to the sight and touch. It is easy to reduce (or bring together) fracture of this bone, but difficult to keep it so.

Seat the patient on a bed or table, putting a pillow behind his back. An assistant is then to place his knee against the pillow, between the shoulders, and draw the arms and shoulders backwards. A wedge-shaped pad, of a convenient size, must be placed in the arm-pit, the broad end being *uppermost*. A common pitch plaster is often useful in the cure.

Apply a long bandage, about four inches wide; pass it (like a figure of 8) over the shoulders and under the arm-pits, so as to keep the shoulder back and hold the pad. The turns should be repeated two or three times, and drawn rather tight. The opposite figure exhibits a *back* view of the bandage. Then apply a narrow pad above and below the fracture, to fill up the hollows.

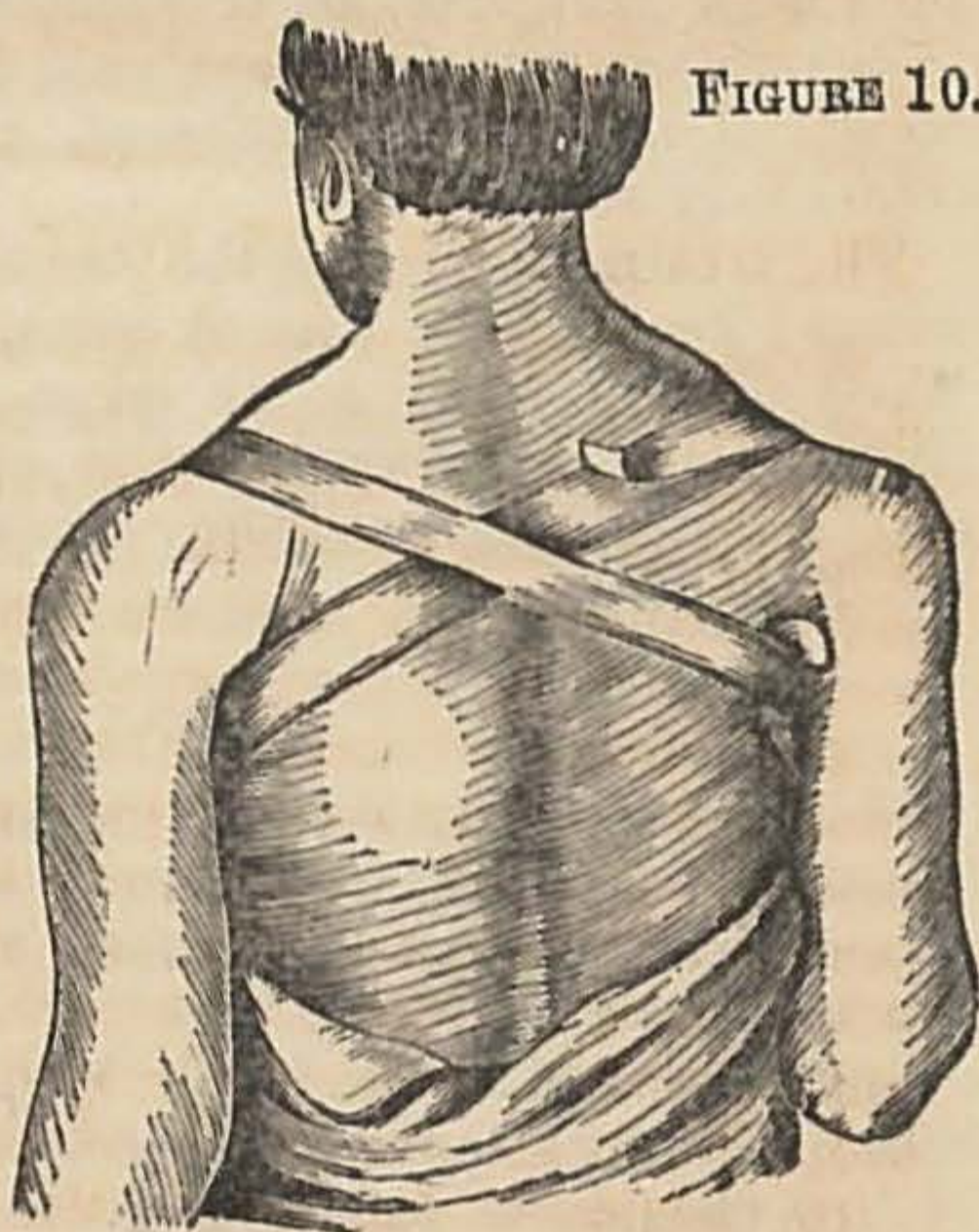


FIGURE 10.



The bandages may be moistened with Goulard's Lotion.

The arm may be slung in a handkerchief, with the hand kept pretty high up, and the elbow well supported. It may be of advantage to put a bandage round the body and arm, so as to fasten the arm close to the side.

The three points which most need attention, are these:—

Keep the shoulder *outwards*, by the wedge-shaped pad: Keep it *back*, by the bandage: Keep it *up*, with a sling.

---

### FRACTURE OF THE RIBS.

Broken Ribs are known by a severe pain in the side, particularly when the breath is drawn in; the patient complains of a jarring sensation; and, on examining the side with the fingers, the fracture is often readily discovered.

An adhesive plaster may be applied over the fracture; and a long bandage, about four inches wide, applied rather tight round the body. When applying the bandage, direct the patient to draw in his breath and hold it as long as he can; then tighten the bandage. A pad may be placed over the part.—See "Strengthening Plaster" (No. 35), page 36.

When the ribs are broken and driven inward so as to injure the lungs, the symptoms of such an injury are, great difficulty of breathing, with increased pain of the part, and spitting of blood: if not speedily relieved, the inflammation soon becomes very severe.

The treatment may be the same as in Inflammation of the Lungs; keeping the patient quiet, and allowing no talking. Blood may in this case be taken from the arm, as soon as possible, and the bowels freely opened. Should great difficulty of breathing continue, repeat the bleeding, and keep the diet low.

---

When the bones of the Nose are broken in, they may be raised to their place by means of a quill or other instrument introduced into the nostril; they will generally keep up without further assistance.

In a fracture of the Lower Jaw, the parts are to be accurately replaced, and kept firm by an assistant. A thick pad of lint should be placed over the seat of the fracture, and



bandages applied, about four inches wide, so as to hold the chin and jaw firmly, upwards and backwards. Apply one bandage under the chin, and tied at the top of the head, then another tied at the back of the neck.

Fracture of the Skull it is unnecessary to say much about, as, in the absence of a surgeon, little more can be attempted than bleeding the patient (if the pulse is strong with fever), keeping him cool, on a low diet, with mild dressings, and giving proper physic. The hair should be cut off from the injured surface, and for two inches round the wound, to allow of close examination, and to prevent irritation of the parts.—See also page 61.

The fracture may occur without any actual wound over it.

If the scalp has been laid open by the injury, and a portion of the fractured skull is seen to be pressing on the brain, an attempt may be made to get a blunt spatula, or the handle of a small spoon, *gently and gradually* under the depressed portion of bone, sufficiently to raise it up, when the patient will most probably recover his senses.

Whenever the Brain or Spine has been injured, it becomes requisite to pay frequent attention to the patient's *cleanliness*, and to his condition in all respects.—See page 66.

In all diseases where there is delirium or insensibility, from fevers, or injuries in the head, &c., it is the duty of the attendant to see that the urine is not retained by the patient for an unnatural length of time, or the most fatal results may be the consequence. It will therefore be necessary that the patient should be closely watched.

---

## RUPTURE, OR HERNIA.

The most frequent causes of Rupture among seamen, are blows on the stomach, violent exertions, and sudden straining of the body. When rupture is produced by bodily exertion, the tumour or swelling is generally formed suddenly, attended with a sensation of something giving way at the part, and considerable pain; but it sometimes comes on gradually, until, from the size of the swelling, great inconvenience is felt. If, through negligence, the ruptured portion of the gut be allowed to remain out of its place, and the bowels to become costive, the most dangerous consequences follow.

In order to return the gut to its natural situation, the patient



should lie on his back, with his lower extremities raised eighteen or twenty inches higher than his head and shoulders, the thighs bent up towards the body, and that thigh on the same side as the rupture inclined inwards.

The rupture most commonly appears in the groin, and generally takes a direction towards the testicles; but it sometimes pushes into the front of the thigh. The pressure should always be directed upwards and outwards, in the former case; and first backwards and then upwards, in the latter.

Those afflicted with rupture soon acquire a knowledge of the easiest mode of restoring the gut to its proper position, by pressing with the hand. No *violence* must be used; but if the rupture be not soon reduced, the upward pressure on the tumour, which is made with the hand for that purpose, may be continued as long as much pain is not felt. While it remains under control, or so long as he can return the gut, the inconvenience of the tumour is of comparatively little consequence; but, to guard against the dreadful mischief arising from allowing it to become changed into what is called a *strangulated hernia*, any person having a rupture should procure a good spring *truss* before he goes to sea, and wear it *night and day*.

Pain and costiveness of the bowels, hiccough and vomiting, are the tokens of the more dangerous form of rupture.

One of the Opium Pills (No. 60) may be given. Blood should be taken from the arm until he feels faint. A mixture of equal parts of spirits, vinegar, and water must be applied to the tumour: pounded ice, if procurable, would be preferable. While in a state of faintness, an attempt must be made to restore the gut to its natural situation. For this purpose, the patient should be placed on his back, with the head and shoulders raised, and the knees drawn up towards the belly. Take that part of the rupture which is nearest the belly, between the finger and thumb of one hand, and gently squeeze it, pushing the lower part upwards with the other hand. Persevere for half an hour, but without using violence, or causing much pain, lest inflammation should be brought on. Should this fail, take blood from the arm, and, if possible, put him into a warm bath: then repeat the attempt for another half-hour. If still unsuccessful, weigh *accurately* one drachm of tobacco, pour one pint of boiling water upon it, and let it stand for *ten minutes*; strain it clear, and inject *half* the quantity, as a clyster: if it does not produce sickness, chillness, and perspiration, in about twenty minutes afterwards, throw in the remaining por-



tion. As soon as the tobacco begins to take effect, make another attempt.

If these remedies fail, the only means of saving the patient's life will be an operation, which can only be performed by a skilful and practised surgeon. No ruptured man should go to sea without a well-fitting truss. In a case of rupture when out at sea, *all means* that the case admits of should be used.

---

## GRAVEL AND STONE IN THE BLADDER.

Many medicines have been recommended ; but few have proved permanently beneficial. Attention to diet in eating and drinking will have the most effect ; mild nourishing food will be the best, with vegetables, if procurable, avoiding malt liquor, and everything the least acid. The bowels must be particularly attended to, by giving one or two tablespoonfuls of Castor Oil (No. 24) ; and the following medicine may be given : three drachms of Salt of Tartar (No. 56), dissolved in half a pint of cold water ; forty drops of Laudanum (No. 22), and a tablespoonful of Sweet Oil (No. 26) ; to be well shaken together ; two tablespoonfuls to be taken three times a day, in a cup of barley-water or Linseed Tea. Carbonate of Soda (No. 46) will also be useful, in doses of two scruples three times a day, dissolved in half a pint of water, with ten grains of Tartaric Acid (No. 47), and drunk during the effervescence. This plan, followed up, will, in many cases, obtain some relief, until surgical assistance can be procured.

When the patient cannot pass his water, he should lie on his side, or try any other position that may enable it to pass. Should this fail, a Catheter must be introduced (as directed at page 83) up the passage into the bladder.

---

## SUPPRESSION OF URINE.

This serious affliction is a case for an experienced surgeon.

The most usual causes of difficulty in making water, are Clap, Stricture, stones in the Bladder, injuries of the Spine, cold, fever, &c. When the first of these complaints has been treated improperly (which is frequently the case), from the desire, on the part of the patient, to effect a speedy and secret cure, by taking large doses of the medicines usually given,



thereby producing irritation and inflammation in the urinary organs, blocking up the passage, so that the patient is unable to pass his water; when this is the cause, and the case is severe, take a pint of blood from the arm, and give forty or fifty drops of Laudanum (No. 22.)

Sweet Spirit of Nitre (No. 21), Linseed (No. 50), and Gum Arabic (No. 51), are useful medicines in cases of suppression of urine. The diet should be low.

In cases of complete stoppage of the urine, when there is much swelling and pain at the lower part of the belly, a small bougie, or Catheter (which is preferable), *well oiled*, should be carefully and gently introduced, until the urine escapes. Placing the patient in a warm bath for half an hour would assist very much.

If the patient is taking medicines for the Clap, they should be discontinued during the difficulty of making water.

A severe cold sometimes causes suppression of urine, and the attack is sudden. In this case give the Fever Powders (No. 14) every three or four hours; or dissolve one grain of Tartar Emetic (No. 39) in a teacupful of water, and give half a wine-glassful every hour, allowing the patient to drink freely of gruel or barley-water, with a little Nitre (No. 10) dissolved in it.

The same complaint is brought on by excesses, and by long continuance of the Clap, and is known by the name of Stricture; sometimes becoming, from neglect, of a most serious and dangerous nature.

When the urine has not been passed for twenty-four or thirty-six hours, the Catheter should be introduced twice a day into the bladder, through the passage of the yard, until the urine flows naturally. If this cannot be done, and a firm round swelling be felt at the bottom of the belly, the case becomes of a most serious nature. There is then but one alternative to save life—an operation, which may be attempted, but should not be resorted to until every other method has failed. It is performed by plunging a lancet exactly into the middle of the lowest part of the swelling, and immediately introducing the Catheter *up the yard*, retaining it there for thirty-six hours. The patient should be allowed but *very little drink*, and lie on his back as much as possible.

A real STRICTURE is the partial or entire closing up of the urinary passage.

This disease comes on gradually; its approach is known by



the urine flowing in a small stream, or by drops, and requiring much straining on the part of the patient; the precise situation can frequently be ascertained by external examination. There is no medicine that will be of much service; the daily use of the Bougies is the only available remedy. Attempts should be made to introduce a small one, once a day, for about a week, then use the next size for the same time; gradually increasing until the largest will pass without difficulty.

---

## THE CATHETER, AND BOUGIE.

When an obstinate case of retention of urine takes place, and after the usual remedies have failed, it will be necessary to make use of the Catheter to draw off the urine. These instruments are small hollow tubes, of sizes varying from a small cord to a goose quill, either made of white metal, silver, or elastic gum. There is a small hole on the side near the end, for the urine to flow through after the Catheter has been inserted into the bladder. Elastic Catheters are the safest for inexperienced hands; there is a small wire inside, with a plug at the handle, for the purpose of keeping it sufficiently stiff during insertion.

When it is to be introduced, place the patient on his back, keep him warm, with his head and shoulders raised, and the knees drawn up towards the belly; the Catheter is then to be *well oiled* with a little Sweet Oil, and holding the urethra (or yard) in one hand, the point of the instrument to be passed into the orifice of the urethra; gently pass it on, keeping the penis stretched; but if it meets with any obstruction, keep it resting, very lightly, against the obstruction for a minute or two, then withdraw it, depressing the handle, and it will generally pass on again; do this until it passes into the bladder, which is easily distinguished by the non-resistance; the wire may be then withdrawn, and the patient is immediately relieved by the urine flowing through the tube. The forefinger, passed into the fundament, will sometimes guide the instrument.

The BOUGIE is used in a similar way, but chiefly to remove any obstruction in the passage; or to enlarge it, when, from inflammation or other causes, it is contracted or choked up, as in Stricture. It is elastic, and of various sizes, but not hollow. The smallest size should be introduced first; but



sometimes the middle-sized one will pass, when the smallest could not; and therefore both should always be tried. Before introducing it, it should be slightly bent, and covered with oil, to prevent irritation. Great care is requisite; if *force* is used with this instrument, or with the Catheter, there is a danger of rupturing the membrane of the passage, which (unless a skilful surgeon was at hand) might be certain death. It may be worn at first for about half an hour, gradually increasing the time, from day to day. As the resistance diminishes, the size of the Bougie is to be increased. After having used a small Bougie for the requisite time, use, in the same manner, a larger size for the same time, and so on, until the largest is used. They may remain inserted as long as pain or inconvenience is not felt,—changing them about every third day, or introducing them morning and evening, for twenty minutes, or an hour.

No man, suffering from Stricture, should venture to sea without being perfectly familiar with the use of these instruments.

It should be remembered never to use either the Catheter or Bougie without *oiling them well*; and also to be *very careful* when it meets with any obstruction.

---

## PILES.

This painful disorder is brought on by continued costiveness, a full habit of the body, sitting on damp ground, or unusual exercise on horseback. It consists of small tumours around the fundament, sometimes in separate lumps, and sometimes forming a ring, making it extremely painful for the patient to walk or sit, and especially when at stool. Sometimes there is a discharge of blood on going to stool, which is called the Bleeding Piles; the former are the Blind Piles.

Strong purgatives (especially *Aloes*) do mischief. Costiveness is the chief cause of piles. The bowels should be opened with *gentle* medicines, such as, twenty grains of Jalap (No. 2), and forty grains of Cream of Tartar (No. 5), mixed together, and given in water or a little treacle. A teaspoonful of Sulphur (No. 6), and one of Cream of Tartar (No. 5), may be taken three times a day, in a little water or treacle. Twenty to forty drops of Balsam Capivi (No. 28), twice in twenty-



four hours, on sugar or in a little water, is a good remedy; small doses of Castor Oil (No. 24) will also be of service.

The inward piles, if attended to quickly, will easily be relieved and removed by the gentle purgatives above mentioned, particularly the Sulphur and Cream of Tartar.

The tumours may be anointed with the following ointment twice a day. Take of Lard, or of Ointment (No. 34) one ounce (or about the size of a large walnut), twenty grains of Camphor (No. 42), rubbed down to powder by mixing it with sixty drops of Laudanum (No. 22), and twenty drops of Goulard's Extract (No. 38); these are to be mixed together on a pill-tile or plate, with a bolus knife. In severe cases, accompanied by great pain and inflammation, the parts should be fomented with warm water, and a warm poultice of linseed meal or camomile flowers applied every three hours.

When the Bleeding Piles return periodically, once in three or four weeks, the discharge may be considered salutary, and should not therefore be stopped, unless it becomes so excessive as to weaken the patient.

In some instances, the falling-down of the gut will be a troublesome attendant on the Piles; in which case, to prevent inflammation, the gut should be immediately replaced after every evacuation, by pressing gently upon the part with the fingers; and its return may be prevented by astringent applications, as Alum (No. 54) dissolved in vinegar, decoction of oak bark, &c.

---

## VENEREAL DISEASES.

These are sometimes the most troublesome, and too often the principal complaints on board ship, especially at the commencement of the voyage.

A simple Clap is attended with thick yellow matter running from the orifice of the penis or yard, and is frequently accompanied with pain and scalding in making water, and painful erections of the yard when in bed; sometimes also with great inflammation.

The yard must be frequently washed, and each time well soaked in warm water, during the first six or eight days; and the bowels kept well open with Epsom Salts (No. 9); exercise avoided much as possible, and all spirituous and malt liquors,



as these make the disease much worse; diluting drinks, such as barley-water, with or without Gum Arabic (No. 51), Linseed tea, toast and water, or tea, may be drank freely.

It is almost always the case that, *as soon as* a person has got the Clap, he takes Capivi, or uses injections, which will only aggravate the complaint when *injudiciously* used.

Notwithstanding that pain in making water, and troublesome erections in the night, have been removed, the discharge or Gleet may still continue without much, if any, abatement. In this stage of the complaint, a teaspoonful of Balsam Capivi, with as much Spirits of Nitre (No. 21), may be taken in a little water, three times a day. The medicine may be continued until after the discharge has ceased; it ought *not* to be left off entirely, as soon as the discharge has disappeared, but lessen the dose, and times of taking it, gradually; as from three times a day to twice a day, from once a day to every second day, and so on. The cure will also be assisted by a weak injection; see the Injection Powders (No. 13). Throughout the complaint, the bowels should be kept moderately open, but not purged. The use of mercury, in claps or runnings, is quite unnecessary.

In the Pox, if the patient should have Chancres or sores on the nut or foreskin, this will require a different mode of cure. Chancres cannot be cured without mercury. Should a small sore appear a day or two after connection with a suspected person, on any part of the yard (especially if the edges of the sore are hard and painful), no time ought to be lost, for the constitution, under these circumstances, is not safe. The assistance of a surgeon should be had, if possible; but if it cannot be obtained, the next best step must be taken.

To destroy the Chancre or sore is the most desirable; and the best method of doing it is, by means of Lunar Caustic (No. 57), or Blue Stone (No. 37), applied to the sores for two or three seconds every other day, and washed immediately afterwards with lukewarm water; after which, the part may be covered with a small slip of fine lint, which may be removed, and a fresh piece applied twice or three times a day, until the sores are healed. Immediately upon applying the Caustic, or soon after, about the size of a common horse-bean of Mercurial Ointment (No. 33) may be rubbed on the inside of the thigh or leg, of that side on which the sores are on the yard. This friction with the Ointment should be continued



for four or five days, night and morning; it will require about ten minutes' friction to cause it to disappear. It is also necessary that two grains of Calomel (No. 3), or two Pills (No. 8), should be taken night and morning for the above period; if they purge and gripe, take five drops of Laudanum (No. 22) with each dose. Should the mouth *not* become sore and tender by this treatment, the Pills should be continued; and when the mouth becomes affected, it should be kept so for a few days, by taking smaller doses (gargling the mouth with weak alum-water), when the disease will generally be cured; but should it not, the above plan must be persevered in. The only thing then necessary, is, to take small doses of Epsom Salts (No. 9) every morning, to clear the system from the Mercury.

It is necessary to remark, that acids should be avoided during the whole of the above treatment; by their being incautiously used, the bowels have been so deranged as to prevent a continuance of the medicine, and in consequence the disease has gained ground, to the most serious injury, and sometimes danger to the patient.

### BUBOES.

Notwithstanding the above remedies have been used with much caution and regularity, swellings in one or both groins may arise, called Buboës. On these tumours appearing, every effort must be used to cure them; the patient, if possible, must be allowed complete rest in bed; the Mercurial Ointment discontinued, using instead, one grain of Calomel (No. 3) with a quarter of a grain of Opium (No. 60), made into a pill, every six or eight hours, until the mouth becomes sore. The soreness of the mouth is the effect wished for; but care must be taken that it is not carried too far. It is difficult, if not impossible, to hit the exact medium; but it must be recollected, that the patient must be supported, and, should the mouth be in such a state as to prevent the admission of food into the stomach, the medicine must be lessened in quantity, or discontinued altogether. When the mouth has become so sore as to demand a suspension of medicine for a time, it ought not to be longer than is absolutely necessary for the partial recovery of the mouth, before the medicine is resumed again. On the subsiding of the pain and swelling, it will, notwithstanding, be necessary to continue the plan for some time longer, but not with so much regularity. Instead of



giving a Calomel and Opium Pill every six hours, one may be given night and morning for a week; then one every night for a week; and one every other night for a week or a fortnight longer.

The diet should be as simple and nourishing as circumstances will permit. It frequently happens, notwithstanding a strict adherence to the above plan, that the Buboes evidently increase in size, and become more painful, and have shooting pains in them. It will then be advisable to discontinue all medicine, and apply poultices of Linseed Meal or Oatmeal to the parts, two or three times a day. In a week or ten days the tumours or abscesses become large and soft, evidently containing matter, which may be let out by means of a lancet, as directed at page 92. Unless it appears absolutely necessary, however, it will be much better to let it ripen and burst of itself, as the skin of that part is so tender, that an active Buboe is sure to burst when sufficiently ripe.

After the discharge of matter, the wound is to be dressed with Lint, over which has been spread some simple Ointment, such as No. 32 or 34. The Calomel and Opium Pill (or one of No. 8) ought to be given again, and continued for four or five weeks, until the part has been healed for some time.

There is one very material thing to be well observed; that is, after the Buboe is opened, there will, of course, be a great discharge from it, and if care is not taken in preventing the matter from continuing too long between the thighs and the testicles, the acrid nature of the discharge will excoriate, and be as bad as boiling water. This must be attended to, and the parts washed every time before you dress it, which must be two or three times a day. This caution is highly necessary, for it not only occasions the part to heal much sooner, but renders it more comfortable for the patient.

### CHORDEE.

This painful symptom, attendant on Clap, proves most troublesome at night, when the patient is warm in bed. It comes on with a spasmodic contraction of the urethra, or passage for the urine, and bends the yard down in a curve, with great pain, which is much increased if attempted to be raised towards the belly; and the stimulus occasions it often to be erected. Rubbing the parts with Laudanum (No. 22), and



keeping small linen cloths dipped in the same, constantly applied, removing them as often as they get warm, will greatly relieve, and tend to remove the spasms. The most certain method of preventing this unpleasant symptom is, for the patient, when troubled with it, to take forty or fifty drops of Laudanum (No. 22), in a little water, at bed-time.

It is necessary to observe, that there are two other symptoms attendant on the Venereal Disease. One, called by medical men PHYMOSIS, is when the foreskin completely covers the nut, and cannot be drawn back, causing the discharge from the sore to be retained, increasing the swelling, and often obstructing the passage of the urine. The other, termed PARAPHYMOSIS, is when the foreskin is drawn *back*, and cannot, from the inflammation, be returned, producing much suffering if allowed to remain in that state, from the continued circular pressure round the yard.

In both these cases, when there is much inflammation, in the first place, draw blood from the arm pretty freely, and open the bowels with Epsom Salts (No. 9) and Senna (No. 61); with perfect rest and a low diet. Local blood-letting (so useful in other inflammations) would not be advisable here; because, if the matter which flows from beneath the foreskin should happen to come in contact with the wounds produced in bleeding the part, very troublesome sores may be the consequence. Both symptoms may be treated almost alike, using gentle means to restore the foreskin to its natural position. After the blood-letting, it will be necessary to immerse the yard in warm water frequently, or to have recourse to warm soothing Fomentations made with Camomile Flowers, (No. 41), as directed at page 37, or by adding half an ounce of Laudanum to a pint of hot water; afterwards applying Linseed Meal (No. 59) or Oatmeal Poultices, mixed up with Goulard Water (see No. 38), and laid on cold, changing them frequently. The patient must be kept in bed, or lying on his back as much as possible. If obliged to move about (which will delay the cure), he should support the yard up to the belly by means of a handkerchief, or any other bandage.

In Phymosis, besides pursuing the plan just recommended, it will be advisable, every now and then, to inject with the syringe a little warm water under the foreskin, in order to wash away any matter that may have lodged there. When Phymosis is accompanied with Chancres, it will be better to



inject, once or twice a day, with the following:—Dissolve four grains of Lunar Caustic (No. 57) in two wine-glassfuls of water.

### SWELLED TESTICLES.

The Swelled Testicle frequently happens in these complaints, particularly when the running has been unseasonably checked by too early and large doses of Balsam Capivi,\* cold, hard drinking, strong purges, violent exercise, and the too early use of injections. In the inflammatory stage, the patient should lie on his back in bed, and a dozen leeches (if procurable) should be applied; or bleeding from the arm, which may be repeated in a few days, if the violent symptoms render it necessary: the food must be light, and the drink, such as linseed tea, barley-water, &c. High-seasoned food, salt meat, wine, and everything of a heating nature, should be avoided; fomentations are very useful; poultices ought constantly to be applied when the patient is in bed. Give a purge of Senna Leaves (No. 61) and Epsom Salts (No. 9). After the bowels have been well opened, one grain and a half of Opium (No. 60) with five grains of Calomel (No. 3) should be given every night until the pain be relieved, or the mouth be made sore. When not in bed, the Testicles should be kept warm, and supported by a bag or truss, which may be easily contrived in such a manner as to prevent the weight of the Testicles from hanging down, which would produce great uneasiness: a large silk handkerchief would be a good substitute, by supporting the Testicles, and passing it round the body.

### GENERAL OBSERVATIONS.

The condition of the patient ought always to be considered previously to his entering upon a course of Mercury in any form. It would be rash and dangerous to administer Mercury to a person labouring under any violent and acute disease, such as putrid fever, pleurisy, slow hectic fever, or the last stage of consumption. Should the patient's strength have been greatly exhausted by sickness, labour, or abstinence for any length of time, the use of Mercury must be postponed until, by rest and nourishing diet, it can be sufficiently restored.

In diseases of a less dangerous nature, as Asthma in its mild

\* See also page 86, on using Capivi improperly.



form, the Gravel, &c., Mercury may be administered, when necessary.

Great attention to cleanliness, sobriety, and proper food, is *of the utmost importance* for such as labour under these diseases. Disregard of these important matters endangers the cure, or even the patient's life. Exposure to cold, wet, night-air, or excessive fatigue, and neglect of proper clothing, is very injurious, especially while using Mercury or Calomel.

There is hardly anything of more importance, either for preventing or removing the Venereal Disease, than Cleanliness. By early attention to this, the infection might often be prevented from entering the body; and where it has already taken place, its effects may be greatly lessened. The moment that any person has reason to suspect that he has received infection, he ought to wash the parts with brandy and water (half and half) or sweet oil; a small quantity of warm water (or new milk, if it can be had) may be injected up the yard.

One of the most unfortunate circumstances attending patients in this disease, is the necessity they are often laid under of being *soon well*. This induces them to take medicine too fast, and leave it off too soon; a few days' more confinement would often be sufficient to perfect a cure; whereas, by a neglect of this, a small degree of foulness is left, which at length contaminates the whole body. To avoid this, the patient should never leave off taking medicine immediately upon disappearance of the symptoms.

It is also particularly unfortunate for the cure of this complaint, that not one in ten of those who are troubled with the disease, however badly, are either able or willing to take the proper means to get rid of it; as they must follow their business, and, to prevent suspicion, must work and live like the rest; this is the cause of one-half of the mischief that arises from the complaint. The cure is seldom or never attended with any great difficulty or danger, when the patient will follow the foregoing instructions; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct, viz., schirrous testicles, ulcerated sore throat, consumption, carious bones, and rotten progeny, are a few of the miseries derived from this source.

There is a species of false reasoning with regard to this disease, which proves fatal to many. As, for instance, a person of sound constitution contracts a slight degree of the disorder; he gets well without taking much care or using much medicine,



and hence concludes that this will always be the case. The next time the disease appears, although ten times more virulent, he pursues the same course, and his constitution is ruined. It does not appear that the most robust health is able to overcome the virulence of the Venereal infection, after it has once taken its hold, more than the delicate. In such a case a proper course of medicine is always indispensably necessary. Although it is impossible, on account of the different degrees of virulence, &c., to lay down fixed and certain rules for the cure of this disease, yet the above treatment will always be found safe, and, in eighteen times out of twenty, prove successful.

Never neglect to consult a surgeon, if an opportunity occurs, and tell him all the particulars, and what has been already done, as the means of making all secure, and yourself comfortable and happy.

---

## BOILS OR ABSCESSSES.

Almost every person is acquainted with the nature of Boils, so that a description is unnecessary; but there are some kinds of tumour, or swelling, that require the assistance of an experienced surgeon, such as those under the throat, armpits, &c., which should never be opened by any person but a surgeon, as death might ensue in consequence.

As soon as a Boil fairly makes its appearance, suppuration should be encouraged by applying a warm fomentation with Chamomile Flowers (No. 41), or poultices of Linseed Meal (see No. 59), twice a day; this, with warmth and rest, will soon bring it to a head. Should the surface appear white, it may first be pricked with a needle, and if matter oozes out, a lancet may be used to open it, at the most prominent part of the skin: if it be on a limb, the incision should be made lengthwise, and not across the limb. It is, however, generally better to let it burst, when under a tender or thin part of the skin. When it is opened, press the matter out gently, without rough handling or squeezing. Keep poulticing until what is called the "core" is no longer felt upon pressure, all the matter having come out, and the wound is clean and beginning to heal. Should it be inconvenient to put on poultices, Basilicon (No. 31) may be spread upon lint, and applied twice a day as a substitute. For healing the wound, use the



Ointments, Nos. 32 or 34; in some cases, common Adhesive Plaster will be all that is required. A Mercurial Pill (No. 8) should be taken once or twice a week at bed-time, with a dose of Salts (No. 9) on the following morning, after the Boil has burst.

---

## ULCERS AND MORTIFICATION.

When there is a great tendency to Scurvy, or the healthy powers of the body are otherwise impaired and depraved, a slight wound (even the scratch of a pin) may produce a malignant ULCER; in the words of an eminent surgeon, "Nature seems determined that the affection shall spread, parts visible to the eye disappearing by the ulcerative process; the sore goes on, increasing the size of the excavation, so long as the unhealthy action continues; but towards the latter stage (when a healthy action is restored), nature seems just as determined to heal it up again: at first *ulceration* is present and at work; latterly, the process of healthy granulation."

Old sailors, whose constitutions have been much injured by intemperance, are often afflicted with obstinate ulcers, generally in the skin of the legs. The longer such sores continue, the greater will be the length of time necessary to heal them. Ulcers arising from scurvy, chancres, &c., are to be treated according to the directions already given; different treatment being required for ulcers, according to the cause of their appearing; and applications proper for some kinds being useless in others.

If an injury on any part of the leg be neglected, and the patient continues to move about, it is almost certain to ulcerate, sooner or later.

If a wound exhibits any tendency to degenerate into an ulcer, there will be increased inflammatory action; the part will swell and become painful, and the surrounding skin very red. Proper diet, *rest*, and supporting the part with suitable dressings, are the great helps to the cure. Ale, wine, or spirits, salt and heating food, &c., must be abstained from as much as possible; the bowels should be opened once or twice a week with Jalap and Epsom Salts. The sore should be frequently bathed with warm water, and poulticed. This treatment should be persevered in until the *inflammation* is removed, which will be known by the redness of the skin



having subsided, and the edge of the ulcer having a whitish appearance. As soon as the excess of inflammation has been subdued, by poultices, purgatives, and, if necessary, blood-letting, the part may be thus dressed:—Apply a bit of lint, spread with Cerate (No. 32), directly over the sore, and then put on straps of adhesive plaster, about an inch broad, and long enough to go round the limb (or at least to extend two inches on each side of the sore); these slips may be secured by cross ones; they should be so put on as to gently press the wound together, thus supporting the tender granulations, and assisting the contraction which must accompany the cure. Before applying the dressings, the part may be washed with warm water; any hairs should be cut or shaved off, where the straps of plaster are likely to touch. A large piece of lint, spread with Cerate (No. 32), may be applied over the plasters; and if the sore be on one of the limbs, a bandage should be wrapped round nearly the whole of the limb (from its extremity, upwards to the joint) as firmly as the patient can comfortably bear. The same treatment is proper for ulcers which are *healing*. Rough exercise, and all sources of irritation, must be avoided; the part should be allowed to rest in the *horizontal* position. When proud flesh appears, which is known by its being of a red colour, and rising above the edges of the sore, it may be touched with Lunar Caustic, Red Precipitate, or Blue Stone, once a week.

When the ulcer discharges a thin fluid which excoriates or scalds the surrounding skin, causing small spreading sores, a lotion or wash should be used, made with a wine-glassful of spirits to three times as much water, applied two or three times a day with lint; Magnesia (No. 25) may be sprinkled occasionally over the sore, and round it.

Sometimes an open sore shews little disposition to change for the better; there is a slight discharge of thin matter; and, from what may be termed the *indifference* manifested by the surrounding parts, and by the patient himself, this condition of the wound has been termed “a *callous* ulcer.” Such a surface requires more than rest and the usual applications: it must be *roused* from its half-dead state. Stimulant dressings with Basilicon Ointment (No. 31), or a Linseed-meal poultice, aided with Oil of Turpentine, may suffice in some cases; but it may be necessary to apply Red Precipitate, or Caustic.



The same unfavourable conditions which are productive of an ulcerous state of a wound, may also produce GANGRENE, which term (as remarked at page 60) is used to denote the *dying* condition of a part of the flesh, but when, as a certain degree of vitality yet remains, there is a possibility that the alarming symptoms may pass away.

When gangrene first threatens a limb, there will be the usual constitutional indications of severe local inflammation; in the later stage, the pulse will sink, and become more irregular, the skin pale, cold, and clammy, the countenance haggard and anxious; there may be vomiting, hiccough, and delirium. It becomes of the utmost importance to restore the healthy actions, if possible, before the symptoms gather strength enough to proceed to the actual sloughing stages, which is known as MORTIFICATION. All such measures as are likely to subdue inflammation must be resorted to, on the first appearance of gangrene; there will otherwise be little likelihood of arresting the progress of the mischief. The presence of exciting causes of inflammation or disease (such as a bullet in the wound, any irregularities in diet, or other improper treatment of the injury, or foul air round the patient) will occasion an unfavourable habit of body, and give rise to a troublesome, dangerous, and probably even fatal, result.

Mortification may be brought on by severe burns, contusions, or lacerations; by long confinement in one position, tight ligatures round a limb, or exposure to excessive cold.

If it is attended with *Fever*, blood may be taken from the arm, and the patient kept on low diet; avoiding ale, wine, or spirits, until the fever has abated; the bowels should be opened. But if it is owing to a Burn, or to long-continued pressure (as in *bed-sores*), support the strength with nourishing food, strong broths, wine, &c. Quinine should be given, and the patient kept in bed, having plenty of fresh air.

The appearance of Mortification is generally known by a black spot in the centre of the diseased part. A greater or less portion of the surface becomes *dead*, and is called a *slough* (from a similar action of nature which occurs when a snake is "casting" its old skin). A Slough is the result of gangrene running on to mortification, with separation of the *dead* from the surrounding living parts. Sometimes the slough is so thin as almost to escape notice; but where much violence has been done to the structure of the part, or where the habit



of body is faulty, it is often very large. The colour of sloughs is variable: the slighter ones, when they are not tinged with blood, are of a buff colour; more *serious* ones are gray or ash-coloured, mixed here and there with yellow, green, brown, and black.

Whenever a portion of the body, large or small, has mortified, the treatment adopted has for its main object the protection of the sound parts from the spreading destruction, and the relieving the system as soon as possible from that portion which has become dead, by promoting its separation from the living members. For this purpose, the parts may be fomented with warm water, with a little Laudanum, four or five times a day, and linseed-meal poultices, made stimulating by adding a small quantity of Oil of Turpentine (No. 15) and Basilicon Ointment (No. 31), applied until the sloughing ceases, the whole of the mortified portion having come away. The parts *actually dead* may be cut into, and occasionally touched with Lunar Caustic, or Blue Vitriol; the stimulus conveyed by these applications (through the medium of the slough) may induce healthy excitement in the living parts, but they must not be allowed to touch the skin or flesh.

By such means, and by time, a slough will at last become entirely detached, and may then be lifted away, or if it be left by a few shreds only, these may be cut across with the scissors, and when the large mass has been removed, the small remaining portions of these dead shreds may be left to separate afterwards.

The matter which is formed under the slough, after the separation of the dead and the living parts, is a principal means used by nature for throwing off the dying or dead portion, and repairing the injury. When the slough is discharged, the matter becomes cream-coloured and thick. The surface of the wound, at the period of the successful removal of a slough, is in fact usually covered by healthy granulations, and looks red and clean. The sore is now happily in a good condition, and no particular treatment is required beyond the dressing with straps of plaster, and bandaging, as already directed for a healing sore, at pages 94, 95.



## S C U R V Y.

This complaint is brought on by deficiency of vegetables in a fresh state, the use of hard salt meat, bad water, want of cleanliness, and too great use of tobacco. Where a crew is threatened with this disease, it is of the utmost importance to keep the ship as thoroughly clean and *dry* as possible, and the crew in gentle but pretty constant exercise. As a preventive of the attack of Scurvy in the longest voyages, the stores ordered by the Admiralty to be supplied to the crew, afford the best possible security, in the absence of vegetables. The lime or lemon-juice, and the vinegar, may be diluted with a little water, and the addition of the sugar tends very much to prevent irritation in the bowels. A free use of Sugar, which is highly nourishing, and very useful in preventing a tendency to putrefaction, is excellent as a preventive of the impoverished state of the blood, which brings on this and other diseases. See also Elixir of Vitriol (No. 20).

When the Scurvy begins to make its appearance, the patient becomes unwilling to work, and exhibits symptoms of sickness and uneasiness; the skin has a dry disagreeable feel, the legs begin to swell, and appear glossy, the breath is very offensive, and the breathing difficult when standing upright; the gums begin to swell and bleed, becoming soft, spongy, and painful. Old sores often break out into ulcers, and old fractures become again disunited.

In hot climates, as soon as the sores begin to bleed, the legs to be blotched, and have a dark appearance, either an obstinate costiveness or looseness prevails, and bleeding begins from the nose and mouth.

Great attention should be paid to the approaching symptoms, that the complaint be not mistaken for one requiring the use of the Lancet. See page 48, "When *not* to bleed."

The Lime Juice may be applied to the sores, by means of Lint, twice a day; or the following Lotion:—Take of Nitre (No. 10) two drachms, and dissolve in a quarter of a pint of common brown Vinegar; this last is a most excellent remedy, and may be used in the same way.

In the course of this disease, particular symptoms may arise which will require a separate treatment. Should there be costiveness, Castor Oil (No. 24) will be the best and safest purgative to give. Pains in the belly may be relieved by a